June 1960

THE CANADIAN CHARTERED ACCOUNTANT

THE CANADIAN INSTITUTE OF CHARTERED ACCOUNTANTS

Organization for Planning

A Lawyer Looks at Estate Planning

Punched Card and Electronic Processing

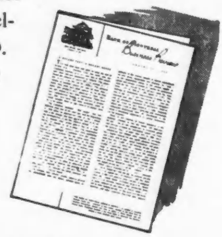
Accounting for Land Development Companies

An American Viewpoint on Accounting Concepts

SPECIAL FEATURE
The Real Estate Tax

TAX REVIEW: The Budget, 1960

ACCOUNTING RESEARCH: Accounting for Inflation



THE CANADIAN

CHARTERED ACCOUNTANT

VOLUME 76, No. 6 **JUNE 1960**

EDITORIAL **PAGE**

ARTICLES

SPECIAL FEATURE

DEPARTMENTS

MONTHLY FEATURES

The Canadian Chartered Accountant, June 1960. Published monthly by the Canadian Institute of Chartered Accountants. Chairman, Editorial Board, H. S. Moffet, F.C.A.; Editor, Renny Englebert; Asst. Editor, Jean Vale. Advertising Representative, E. L. Vetter. Editorial and Business office: 69 Bloor street east, Toronto 5. Subscription rates: $6 a year; 60 cents a copy. Printed by General Printers Limited and mailed at Oshawa, Ontario. Authorized as second class mail by the Post Office Department, Ottawa. Opinions expressed are not necessarily endorsed by the Canadian Institute.

IN THIS ISSUE

H. H. STIKEMAN, Q.C. (page 533)

The ideal end of a perfect estate, writes H. Heward Stikeman in "A Lawyer Looks at the Accountant in Estate Planning", "would enable the client to die a pauper while living as much like a prince as possible". The well-known Montreal lawyer goes on to show in his article how the accountant, as a result of the federal Estate Tax Act which came into force at the beginning of 1959, has more opportunities than ever before in the field of estate planning, and how, because of his day-to-day connection with his client's business, he is singularly well-equipped to discern the need for estate planning in the first instance. To many accountants, estate planning is a service of comparatively recent origin and the author offers some practical rules which should help them in the work of preserving their clients' estates.

Mr. Stikeman practises as tax and corporate counsel in the legal firm of Stikeman and Elliott, Montreal. He was formerly assistant deputy minister of the Taxation Division, Department of National Revenue and later served for two years as counsel to a special committee of the Senate formed to investigate the study of taxation in Canada. He is the author of many articles in the field of taxation and is in constant demand as a speaker in legal and accounting circles.

D. R. DILLEY (page 540)

"An American Viewpoint on Accounting Concepts" reflects the thoughts and observations of a business executive who feels that there is often a lack of understanding on how basic accounting concepts fit into a definite structure of accounting theory. His present article is an endeavour to bring about a better understanding of accounting among those who are not professional accountants and to set forth what constitutes the basic framework of accounting theory. After reviewing what he considers to be the seven more important accounting assumptions or ground-rules, the author relates these to five "doctrines" or strongly held opinions by either individuals or organizations. He concludes by defining accounting principles and the rules which serve as guides to accounting practice.

Mr. Dilley received his B.A. in accounting from Drake University, followed by graduate work in Europe. He later taught at Indiana University where he obtained his master's degree and doctor's degree in business administration and economics. In 1955 he joined United States Steel Corporation and is currently senior statistician in the New York office of the administrative vice-president and comptroller. Active as a speaker and writer, he has also lectured in business administration at the University of Pittsburgh.

J. A. WILSON, F.C.A. (page 546)

More than 1,150 accountants from Asian and Pacific countries visited Australia recently to attend the Asian and Pacific Accounting Conference and exchange information and experience on matters of professional concern. Representing the Canadian Institute of Chartered Accountants was John A. Wilson, first vice-president, who prepared two papers: "Punched Card and Electronic Data Processing",

Continued on page 518

Continued from page 516

which is reprinted this month, and "Independence in Accounting Practice", which will appear in a later issue. The development of the electronic computer and electronic data processing techniques has been hailed as one of the most important factors that will affect business in the second half of this century; yet, points out the author in "Punched Card and Electronic Data Processing", over-mechanization may be costly and inefficient. "The goal", he says, "should not be merely the production of more figures, more quickly, thereby creating serious filing and waste paper basket problems, but to produce only information justified as useful in relation to cost and sufficiently quickly to provide maximum assistance to management."

Mr. Wilson is a partner of Touche, Ross, Bailey & Smart, a past president of the Institute of Chartered Accountants of Ontario and past chairman of the Canadian Tax Foundation. He was admitted to the Institute of Chartered Accountants of Ontario in 1933 and was elected a Fellow of the Institute in 1947. He will be president-elect of the Canadian Institute of Chartered Accountants at its meeting in Banff, Alberta, in September.

RALPH DAVIES (page 556)

In "Organization for Planning", Ralph Davies considers the main stresses and strains with which management must concern itself in building an organization structure. He recognizes some of the outside influences, political and technological, which affect industrial development and presents a forward planning program which, if carried out successfully, can spell the difference between success and mediocrity in a business.

Continued on page 520

Continued from page 518

Mr. Davies joined the management consultant firm of Urwick, Orr & Partners, Limited, London, England, in 1949 and came to Canada in 1956 as senior consultant in charge of the Toronto office of Urwick, Currie Limited. He was recently appointed president of the Canadian company. An active member of the Society of Industrial and Cost Accountants, he has written a number of professional articles and lectured at various seminars on management development.

D. A. SPENCER, LL.B., C.A. (page 565)

A plan of "Accounting for Land Development Companies" proposed by David A. Spencer is an approach to a problem resulting from the tremendous variety of circumstances which surround land development projects: allocation of raw land costs, apportionment of development costs to sub-divisions of the original tract, carrying charges before and after development, and the treatment of promotion costs and profits from lot sales, to name but a few. His article should be highly useful to accountants whose function it is to guide and guard the expenditures of these expensive land ventures.

Mr. Spencer is currently associated with the Montreal office of Peat, Marwick, Mitchell & Co. His training and experience include a B.A. degree and LL.B. degree from Cambridge University, and in 1957 he was admitted to membership in the Institute of Chartered Accountants of British Columbia.

EDITORIAL (page 531)

No group is better qualified to serve as advisors to small business than chartered accountants, a fact which inspired this month's editorial "Serving the Needs of Smaller Business" by D. Bruce Davis, F.C.A. of Kitchener, Ontario. While more often than not it is the function of the smaller practitioner to serve the needs of the smaller business, the author recognizes that consultation with other specialists is frequently required. Far from weakening the case for the small practitioner, his ability to call on expert help as and when it is needed is one of his greatest assets.

Mr. Davis is senior partner of Davis, Dunn & Broughton, Kitchener, Ontario and a member of Council of the Institute of Chartered Accountants of Ontario. He was admitted to membership in the Institute of Chartered Accountants of Ontario in 1940 and elected a Fellow in 1956.

nt
s,
ts
t,
e-
o-
ot
le
t-
d
x-

d
t,
g
e
e
l-
e
h

o
s
t
l
-
f
n
e
s
.
.
.
l
.
.
.


the alchemy to turn the 1960's into gold
M O N R O E
This decade's richest rewards belong to men who make each minute more profit-producing. Formula: increased mechanization in every function in which machine-hours pay off better than man-hours. Ever-more-automatic machines, such as Monro-Matic® Calculators, cut figuring time, make your minutes worth more. Monro-Matics are already at work for companies like:
Robin Hood
Pepsi-Cola
Monroe machines are available through "Figures Unlimited", equipment leasing plan including training and service. Ask your Man from Monroe about it today.
See the MAN from MONROE
for CALCULATING
ADDING · ACCOUNTING
DATA PROCESSING MACHINES
A DIVISION OF LITTON INDUSTRIES
Monroe Calculating Machine Company of Canada, Ltd., Toronto • Offices throughout Canada

NOTES AND COMMENTS

List of Publications

A complete list of the publications of the Canadian Institute of Chartered Accountants has been produced in the form of a small catalogue and will be distributed to all members of the Institute this month. It will also be sent to general subscribers of *The Canadian Chartered Accountant* as well as to the accounting professors and university libraries of Canada and the United States, and Canadian and foreign public libraries. Others may obtain a copy of this list by writing to the Canadian Institute of Chartered Accountants, 69 Bloor Street East, Toronto 5, Ont.

Companies Act

Some supplementary recommendations for amendments to the Companies Act were submitted to the Federal-Provincial Conference on Uniformity of Company Law in Canada by the C.I.C.A. Companies Act Committee under the chairmanship of G. P. Keeping, Montreal. The purpose of the submission was principally to bring the Canadian Institute's recommendations regarding the auditor's report into line with Bulletin No. 17.

An Appeal to Members

As in past years, members of the Canadian Institute are now being asked to suggest names of friends and associates who might be potential subscribers to *The Canadian Chartered Accountant.* Because it is a technical journal, the magazine must expect to find any increase in its readership among a rather select group, and past experience has shown that the most likely prospects are those names given to us by interested members of the Institute. By spending a little time in thinking of some suitable names and returning the convenient form to the magazine office (postage collect), a member will perform a real service to both his profession and to the persons suggested.

Population of Canada

Canada's population reached an estimated 17,732,000 at March 1, an increase of 1,651,000 or 10.3% from the 1956 census total.

Study of Nonprofit Organizations

The accounting research division of the American Institute of Certified Public Accountants is about to begin a study of the accounting problems of nonprofit organizations.

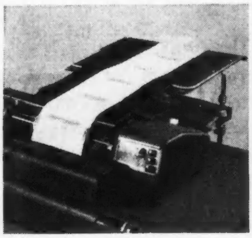
Attention will be focused upon the accounting problems which are characteristic of such enterprises, and an attempt will be made to determine the extent to which accounting principles applicable to business enterprises operated for a profit are appropriate for nonprofit organizations. While the extensive work which has been done in the areas of educational institutions, hospitals and governmental units will be studied and reviewed, primary attention will be devoted to other organizations such as churches and religious organizations, charitable institutions, health and

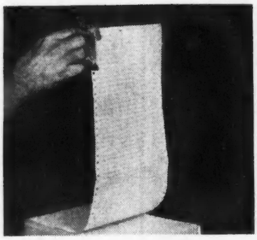
Continued on page 524

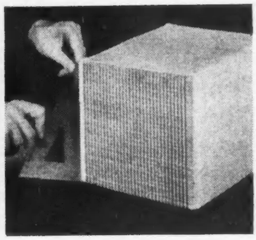
NEW

Moore Speediflex

GIVES YOU THESE THREE FORMS-HANDLING BENEFITS







1 PERFECT FEEDING The entire set of parts and carbon feeds, naturally and in perfect alignment, around the writing platen.

2 PERFECT REGISTER because there's no tenting or peaking, and both sides flow freely in natural, flexible movement.

3 PERFECT REFOLDING in neater square packs results from still another advantage—Moore's unique way of perforating the sets.

This Moore 'first'—a brand new concept—results in new forms-handling efficiency for users of continuous marginal punched forms. The revolutionary new dimension is the flex-cut carbon. It acts as a flexible bond between the various parts, and allows the Speediflex unit to flow naturally without 'tenting' or 'peaking,' aligning at the point of writing for perfect part-to-part register. This great new form introduces many other forms-handling benefits. For a demonstration, look up the Moore man in the telephone directory or write the nearest Moore office.

Patent pending.

MOORE BUSINESS FORMS LTD.*—856 St. James St. West, MONTREAL • 7 Goddard Ave., TORONTO 15 • 711 Erin St., WINNIPEG • 296—12th Ave. East, VANCOUVER. *Over 300 offices and factories throughout Canada, U. S., Mexico, Cuba, Caribbean and Central America.*

* *Division of Moore Corporation, Limited*

Build control with

MOORE BUSINESS FORMS

Continued from page 522

welfare organizations, professional associations, foundations, labour unions, veterans' organizations, and cooperatives. The study will not be concerned with bookkeeping and accounting systems for these groups, but rather with the major accounting problems and general principles which are peculiar to them.

This project will be under the direction of Professor E. O. Henke of Baylor University, Waco, Texas.

Committee Meetings

Several committees of the Candian Institute have met recently:

April 25 – Committee on Magazine and Publications, in Toronto, chairman H. S. Moffet.

April 29 – Committee on Continuing Education, in Toronto, chairman C. C. Mackechnie.

May 10 – Sub-committee on Reliance on Other Auditors, in Toronto, chairman W. L. L. McDonald.

May 11 – Public Relations Committee, in Toronto, chairman C. E. Winters.

May 12-13 – Committee on Accounting and Auditing Research, at The Chantecler, Ste Adele, P.Q., chairman H. I. Ross.

May 26-28 – Committee on Long-Range Educational Planning, in Toronto, chairman W. F. Martin.

May 30 – Sub-committee on the Bankers' Brochure, in Toronto, chairman H. R. Macdonald.

External Trade

Canada's commodity exports in the first quarter of 1960 were valued at $1,291,500,000, higher by 22.8% than a year ago, while imports were valued at $1,330,200,000, 9.3% above last year. Thus the import balance of the quarter was sharply reduced to $38,700,-

000 from $166,200,000 in the same period of 1959.

In Parliament

Last month the House Ways and Means Committee considered a resolution to amend the Estate Tax Act and the following six paragraphs of the resolution were agreed to:—

(1) That the deduction from aggregate net value allowed for the value of any gift made to a charitable organization in Canada be extended to the value of a gift made to a charitable foundation in Canada.

(2) That the Canada Council be deemed to be a charitable organization for purposes of the act.

(3) That there be included in computing the aggregate net value of the property passing on death any amount payable under a policy of insurance effected on the life of the deceased for the benefit of the family of the deceased, where such policy, immediately prior to the death, was owned by the employer of the deceased.

(4) That where the property passing on the death of a person includes property the value of which was determined as of the date of death of that person according to prescribed tables of present values of annuities, and within four years of that date of death there occurs an event, such as a death or change in marital status of a beneficiary, that allows the value of the property to be determined having regard to the occurrence of that event, the property shall, on application made in accordance with prescribed conditions, be revalued and the difference in tax refunded.

(5) That the four year limit, after which the minister may not make a re-assessment unless there has been fraud, misrepresentation or failure to disclose by the person filing the return, may be waived by the executor by notice to the minister.

(6) That any enactment founded on paragraphs (1), (2) and (4) shall apply in respect of deaths occurring after December 31, 1958, and any enactment founded on paragraph (3) shall apply in respect of deaths occurring after March 31, 1960.

In dealing with a resolution to introduce a measure to amend the In-

come Tax Act to make provision in respect to a new class of profit sharing plans under which

(a) amounts allocated by the trustee shall not be included in the income of an individual who is a beneficiary under the plan until the year in which they are received,

(b) no tax shall be payable by the trustee under the plan on the taxable income of the trust,

(c) an employer may deduct in computing income for the year an amount which when added to his contribution, if any, under a registered pension fund or plan does not exceed $1,500 per employee,

the Minister of Finance said: — "As I indicated in the budget speech on March 31, it is our intention at the present session to introduce a separate bill to amend the Income Tax Act in respect of profit sharing plans and to carry that bill no further than first reading at the present session. Then between now and the 1961 session full opportunity will be afforded to hon. members, to persons interested in this subject and to the professional groups, lawyers, accountants and any others who may be interested, to study the measure and to assist us with their views."

Scottish Elections

Alexander McKellar, C.A. was elected president of the Institute of Chartered Accountants of Scotland at its annual meeting on March 30 last. G. A. Usher, M.B.E. (Mil.), T.D., C.A. was elected vice-president.

In the News

George Aitken, C.A. (Man.) has been awarded the medal of honorary counsellor, highest honour bestowed within the ranks of the Canadian Red Cross Society. Mr. Aitken is immediate past president of the Canadian Red Cross, a past president of the Manitoba Division and a member of the finance commission of the League of Red Cross Societies.

CURRENCY EXCHANGE RATES

The following nominal rates of exchange are supplied by The Canadian Bank of Commerce, International Department, Head Office, Toronto, as at 4 p.m., April 29, 1960:

Australia (pound) 2.17¾; Belgium (franc) .0195; Denmark (kroner) .1405; France (franc) .1974; Germany (d. mark) .2320; India (rupee) .2042; Italy (lira) .00157; Mexico (peso) .0776; Netherlands (guilder) .2566; New Zealand (pound) 2.71⅝; Norway (kroner) .1360; Sweden (kronor) .1876; Switzerland (franc) 2331; Union of South Africa (pound) 2.72⅛; Sterling in Canada, 2.70⅞-2.71¾; Sterling in New York, 2.80⅞-2.81¼; U.S. dollars in Canada, 3⅝-3⅝ discount.

CORRESPONDENCE

London, Eng., April 22, 1960

TAX POSITION OF NON-RESIDENTS

Sir: May I refer to the editorial in your April issue on the subject of "Towards Better Tax Law".

On page 348 you suggest that in the event of the replacement of withholding tax by an unidentified increase in the general rate of corporate taxation, non-resident shareholders would be deprived of claiming a tax credit against the tax payable in their country of residence.

This certainly might be true as regards residents in the United States who, I believe, comprise the majority of non-resident shareholders in Canadian corporations. However, the position of United Kingdom residents would not be altered in any way since credit relief is at present available to them at the lower of their effective rates of personal taxation or the rate of indirect tax payable by the Canadian corporation combined with your 15% withholding tax for non-residents. Abolition of this latter tax coupled with an increase in the rate of tax payable by the company should not, therefore, affect the amounts of their claims in any way.

JOHN D. WELLS, C.A.

Editor's Note: You are correct. There is a tendency for Canadians to fall into the trap of thinking of the position of U.S. shareholders to a greater extent than U.K. or other foreign shareholders.

Readers of *The Canadian Chartered Accountant* are invited to express their opinions on articles appearing within our pages. Letters will also be welcome on other topics of interest to the profession but all correspondence must bear the writer's signature and address (which will be withheld, if so requested).

The Editor.

Editorial

SERVING THE NEEDS OF SMALLER BUSINESS

MOST PUBLIC COMPANIES call upon professional consultants for assistance in planning and development. Indeed, many of them engage such personnel on a permanent basis as part of the management team. The role of the chartered accountant, in dealing with smaller businesses, may well include some of these services. In fact, it need not and should not stop with the issuance of an auditor's report on the financial statement and what is behind it.

Some practitioners are not always aware of the extent to which they can provide leadership to small businesses and that they can become a far more valuable ally in the eyes of their clients by offering a great deal of the help which the larger company obtains from the variety of skills personified in the management team. In smaller businesses, management and ownership are often synonymous, and in many cases there is no responsibility to the investing public. The main concern of the management is solving its day-to-day problems and planning for the future. Often the management is the responsibility of a single person with the result that all these problems and plans must be handled personally.

There are many ways in which the needs of the smaller business may be served in addition to auditing of accounts and preparation of financial statements. Some of the most common forms of service are the preparation of income tax returns, the conducting of negotiations upon assessment of these returns and assistance with the preparation of notices of objection and notices of appeal.

In the field of management accounting there is assistance with design and installation of accounting systems and systems of internal control, and the preparation of budgets and forecasts for the control of cash flows and control of operations. In the field of financial management there are such matters as long-term financing and maximum use of available working capital. In some situations the problem of succession is one which can only be met through a proper plan of executive development.

In addition to servicing the smaller business, there is the matter of providing assistance to the owners of these businesses on a more personal basis. A great contribution can often be made by advising and participating in estate planning, a field in which chartered accountants are increasingly active.

In his desire to provide for the needs of smaller business, the chartered accountant must recognize that there are certain areas in which he does not have the special ability or training required in order to supply the client with the services which might otherwise be provided by management consultants, professional engineers or other specialists. If he believes that he lacks the training required to provide such services as time study, plant layout, marketing or, in some cases, systems and procedures, he must be prepared to advise his client to seek outside assistance. Failure to do this will become apparent sooner or later, and with it will come loss of prestige in the mind of the client.

By and large, the smaller practitioner serves the smaller business. He has the advantage of being able to offer personalized service in an area where it is most effective. Although it may seem that through purchase and amalgamations large companies are ever-increasing in size, our system of private enterprise assures us that new smaller businesses will be born every day. The small practitioner must always be mindful of the fact that he can provide services in addition to those of the statutory audit requirements which in many cases may be more appreciated by his clients and enable him to make a greater contribution to the well-being of the community in which he lives.

A Lawyer Looks at the Accountant in Estate Planning

H. HEWARD STIKEMAN, Q.C.

THE FEDERAL ESTATE TAX ACT which came into force on January 1, 1959 offers the accountant more opportunities in the field of estate planning than ever before. Until the last few years most estate planning was done by lawyers and notaries at the will-drawing stage or by far-sighted insurance and trust company advisors. The accountant's role was (in the main) a peripheral one requiring him to give attention to this subject usually only when called upon to do so for purposes of valuation. The new Act, however, will bring the accountant into the estate tax field as surely as he has long been firmly ensconced in the income tax arena as a complement to his legal counterpart. If, as is sometimes lightly said, the introduction of the Income Tax Act has made accountants out of lawyers, so will the Estate Tax Act help to make more lawyers out of accountants.

As an unabashed complement to the Income Tax Act, the new statute uses terminology which, as far as possible, is the same as that in its sister law. The provisions relating to assessment, appeal, control and administration are patterned after their counterparts in the Income Tax Act, and accordingly the mechanics will now have a comforting familiarity for both professions. As the Estate Tax Act is more scientific than its predecessor in its design to extract the last equitable as well as legal cent, it is also more sensitive to the vagaries of accurate valuation, careful planning and "black-letter" rather than equitable considerations.

Object of Estate Planning

In order to understand the role of the accountant in the field of estate planning, the connotation of the phrase itself must be understood. The object of all estate planning is to place the client, as far as possible, in a position which enables him to make provision, while living, for the needs of his prospective heirs and for the payment of succession duties in such a manner as to prevent death from disturbing the business or investment growth-pattern in his estate. Thus, the ideal end of a perfect estate plan would enable the client to die a pauper while living as much like a prince as possible. Theoretically, if estate planning is properly conducted and the various elements are in the correct juxtaposition, the ideal objective above described can be achieved in relative terms. However, such extremes are neither possible nor desirable in most cases, since the

peculiar concept of stripping a man of his worldly goods many years in advance of the "grim reaper" often results in frustration, intra-family conflict, and other uncompensated inconveniences which often make the cure worse than the disease.

Every estate planner has really only three ingredients to work with: the lives affected, the assets involved and the valuation of such assets.

When considering the lives affected, it is important to give thought not only to the testator and his widow, but also his children and, wherever possible, to his grandchildren. Frequently, plans which are well conceived for the generations in view at the time become hopeless stalemates when a new generation has taken the place of the old, and the legal or formal restrictions imposed to render the plan effective become shackles upon the ultimate inheritors which cannot be removed. Thus, the effect upon all affected lives must be fully considered before any plan is completed.

The assets involved require a great variety of treatment. Care must be taken, for example, if real property is disposed of to a holding company (should that be the chosen instrument), that such a disposition does not fall afoul of the provisions of the Income Tax Act, notably section 8, 16, 17 or other sections imposing the concept of constructive receipt. Even where real property is not a trading asset of the transferor, it may involve him in recapture of depreciation when disposed of at fair market value. If, to avoid recapture of depreciation, property is disposed of at book values, it may have overtones of gift tax to the common shareholders of the transferee company. Likewise, speculative securities must be treated with care. Nor can shares in closely held family corporations, heavy with surplus, be lightly transferred to holding companies in the face of section 28 of the Income Tax Act under which such transfer might create a "designated surplus" problem whose consequences could be more far-reaching and more adverse than the estate tax sought to be minimized.

Value of the Accountant

While the role of the accountant in considering the effect upon the lives involved is of less scope than that of the lawyer or the notary, the value of the accountant in determining the proper method by which to deal with various types of assets for an estate plan cannot be over-emphasized. This stems directly from his skill acquired as an income tax advisor since as many of the dangers inherent in estate planning arise under the Income Tax Act as under the Estate Tax Act. Such obvious items as designated surplus, tax paid undistributed income, recapture of depreciation, property values as allocated between depreciable and non-depreciable property under section 20(6)(g) of the Income Tax Act, benefits to shareholders under section 8, and the overall dangers inherent in sections 137(2) and 138, (which strictly applied could have disastrous effects on most non-business transfers between persons not dealing at arm's length) are all familiar to most accountants, but are not so likely to be readily recognized by the average legal or notarial practitioner. Thus the accountant's role in this phase of the planning is to alert his legal associate to the dangers of the situation so as to enable the latter to formulate his solution in a more effective manner.

The third ingredient of estate planning is the value to be attributed to the various assets. The objective will be to so arrange the affairs of the *de cujus* that if he is reasonably young he may dispose of his assets little by little over a long period of time, paying some modest amount of gift tax as he goes. This implies that the assets which he retains during the disposing process must be frozen as to their value. Without such a freezing, the natural increment which enures to most assets in an inflationary economy will constantly increase the value of those remaining in the transferor's hands and render nugatory the giving program itself. The key to a successful estate plan is a freezing of assets coupled with the orderly disposal of the frozen assets over a long period of time.

Valuation of Assets

In most cases the freezing is achieved by the utilization of a holding company to which the testator transfers the assets of which he divests himself during his life in exchange for preferred shares of an equal value. These may be voting or non-voting depending upon the state and nature of the common shareholders and his own plans. Any such transfer involves an accurate valuation of the assets to be transferred for three reasons. First, it must be ascertained how many preferred shares should be issued in exchange for the assets. Secondly, it must be known that the valuation is in accordance with the fair market value formula which would be applied by the Succession Duty Branch itself so as to permit an adequate provision for interim succession duties in the event of the planner's death before completion of the disposal process. Thirdly, one must be certain that the values will be accepted by the gift tax branch of the Taxation Division. Substantial discrepancies either way (i.e. where the testator receives more or less than the value of that which he transfers to the company) could be equally dangerous. The first could involve him in gift tax, and the second in income tax under section 8 as having received a benefit in his equity of shareholder.

In the matter of valuation many other considerations enter. These are dealt with at some length in the Estate Tax Act under Division F entitled *Special Rules Applicable in Determining Value*. The accountant however, will play the chief role in applying these rules. Often he will be better able to value the assets involved than his client.

The great exception to the normal rules of valuation is, of course, the special provision for valuing securities where no closing prices or quotations are obtainable or in valuing shares in closely held companies. Here the accountant is indispensable. He will be able to fit the general business and economic pattern to the particular facts of his client's case so as to produce a result which will be in conformity with that normally reached by the estate tax assessors themselves. His judgment will be able to guide his legal or notarial associate through the accounting and economic process whose application forms the basis of the valuation reached so as to arm him fully for the ensuing fray. The rub throughout the entire valuation division of the Act is, of course, the somewhat unrealistic attitude toward valuing the control by the deceased in the case where he himself is a minority shareholder but where his shares, together with those

owned by persons related to him, control the corporation. Under these circumstances, his shares, even though minority shares, are to be valued as if they were controlling shares unless it can be established that the deceased and the others related to him were actually dealing with each other at arm's length.

In passing, it should be noted that, unlike the Income Tax Act, "arm's length" is nowhere defined in the Estate Tax Act. This is done for a purpose since, as has already been mentioned, normal estate planning deprives the client of his equity interest without depriving him of control of the assets involved during his lifetime. Thus the emphasis in the statute on control has become more marked.

Normal Estate Plan Patterns

The normal route followed in these plans, where the client and the prospective deceased has a wife and children whom he wishes to benefit, is to effect during life as nearly as possible the results that would follow from the normal will on death. The estate may not always be susceptible to the holding company technique, and other plans should be considered according to the circumstances. Where the estate is not suitable for incorporation, or such incorporation is not desired for any other reason, the appropriate measures may be taken by way of reorganization of the business itself, a buy-and-sell agreement between the partners of the business or the co-shareholders, an insurance plan to provide for payment of succession duties and estate tax, a living trust, a charitable foundation or any other plan suited to the individual case.

Most wills provide that upon death of the deceased his property vests in the children with a life income to the widow. Where the estate contains shares in family businesses which are going concerns and which must be perpetuated, additional safeguards are inserted to provide for the continuation of adequate management. Where an estate plan is developed under such circumstances, it is not unusual to find a holding company created which will be owned by the deceased's children and to some extent by his widow, but over which the deceased retains control during his lifetime. These holding companies usually provide for nominal capital in terms of common shares whose destination is the children and a substantial amount of capital represented by non-redeemable, non-cumulative preferred shares with a high interest rate which will be exchanged by the company for the assets of the deceased to be transferred to it. In some cases voting preferred shares are also created. These are usually more in number than the common shares but of low par value. The purpose of such low denomination preferred in most estate plans under the old law was to provide for the retention of control by the deceased during his lifetime; under the new Act such shares should be used sparingly. The same result may be obtained by other means.

Evolution of a Plan

The chronological steps in the evolution of a holding company estate plan would therefore usually go something like this:

(1) The valuation of all the deceased's assets at present market value is obtained by applying the

most appropriate methods of valuation to the particular assets, usually by an accountant. Confirmation of such valuation is generally obtained from the valuation unit of the Succession Duty Branch. This unit is specially equipped to furnish such valuations but will only do so when a gift is in prospect. Since most estate plans involve gifts of substantial amounts, it is not often difficult to obtain confirmation of the values sought.

(2) Once the assets have been valued and confirmation obtained, the holding company is created. In the Province of Quebec where the children are minors they cannot subscribe for the common shares themselves, and thus the common shares must be taken up by the *de cujus* and transferred to the children by way of gift before they become too valuable and the gift tax incidence too high. This will provide a problem in that the *de cujus* must live five years under Quebec succession duty law and three years under the federal law before the common shares will be out of his estate for succession duty and estate tax purposes if they become valuable through subsequent appreciation of the underlying assets. Any other method of dealing with the shares may also create possible complications under section 22(b) of the Quebec Succession Duties Act. Where the children are of age, however, it is imperative that they purchase their shares from their father rather than that they receive them by way of gift. If the child, whether of age or not, receives his common shares by direct subscription from the company, there is a danger that the estate plan may be completely vitiated in Quebec. Since the rates of duty in the Province of Quebec are not much different from those in the federal Act, such a result could be fatal to the plan.

(3) After the holding company is created, the assets which the deceased wishes to freeze are transferred to it in exchange for all of its shares, common, voting preferred and non-voting preferred, if any. At this point in time the client will own all of the shares of the company. The common shares will have little value, and the preferred shares will have only the value of the assets given for them, provided that they have an adequate rate of yield. As an alternative to using voting preferred shares, which is going out of fashion, it is now normal to give a vote to all of the preferred shares. They must also pay dividends at a good commercial yield rate. The next step after the transfer of the assets for the shares is for the father either to give or to sell, depending upon the age of his children, the common shares to them before they have become of any value. If the father does not give or sell the common shares to the children but the children have subscribed for the common shares from the company, then the provisions of section 22(b) of the Quebec Succession Duties Act may apply as already mentioned. This section provides in effect that where any transfers of this type have been made during the life of the deceased, there shall be added to his estate upon his death any difference between the value of the assets which he gave at the time of his death and the value of that which he received for them at the time of his death.

Obstacles to Overcome

Quite apart from the many impediments already mentioned placed

in the path of good estate planning by the Income and Estate Tax Acts, there are some other obstacles which must be considered. These arise from the instruments chosen to effect the plan. If the holding company is not utilized and estate planning is to be effected by a trust, a change of domicile, a cross-insurance scheme or a simple change in the will or a charitable foundation (each of which methods involve considerations of such complexity and magnitude that it is impossible to deal with them here), different obstacles will be encountered. Many, however, are common to most plans.

Generally speaking, every estate plan on whatever basis must take account of the following: the marriage contract peculiarity in the Province of Quebec; the Succession Duties Act of the Province of Quebec and Ontario, and any other jurisdictions which might be involved outside of Canada; the possibility that after the estate plan is set up and all the lines are finally drawn the testator will have more children; the possibility that after the plan is rendered firm a divorce or separation may have to be faced; and the difficulties imposed by the existence of minor children themselves, particularly in the Province of Quebec. While many of these obstacles are of a legal nature and not the concern of the accountant, the possibility that they may arise must never be absent from his thoughts.

Role of the Accountant

What, then, is the proper role of the accountant as an estate planner? It may be summarized as follows:

First and foremost, it is to gauge the need of his client and tell him in general whether it is desirable for him to contemplate an estate plan. More than anyone else closely connected with his client, the accountant will sense the need and the moment. His day-to-day connection with his client's business and other affairs, together with his objective position, equips him to discern the need in the first instance.

The accountant will probably be best equipped to select the method although he may need to consult lawyers, notaries and other practitioners in this field in order to be certain that all the possible methods are canvassed before one is chosen. For example, he will know whether the plan could be effected by a simple divesting of equity interests or whether it would require the protection of a viable business by the creation of some continuity in management through an employee-management group with adequate incentive.

It will be the role of the accountant to guide the client to the appropriate source of technical assistance. The accountant will know the nature of the assistance required, whether that of a lawyer, notary, real estate valuator, insurance counsellor or underwriter.

The accountant, being the one constant link between his client and the other technical advisors, must work in collaboration with all of those who are required to be brought in. This is perhaps his most important role since he will be responsible for bringing to the attention of the other planners all the factors involved which have come to his knowledge during his professional association on a day-to-day basis. Some of these factors may indeed be unknown to his client. He will, as already stated, be indispensable in preparing valua-

tions and briefing his legal associates preparatory to their negotiations with the authorities. He must also compute the probable results of the alternative available plans for the benefit of his client in order to ensure that the choice will be properly weighed.

Lastly, he will be best advised to establish a flow sheet charting the control, development and fulfilment of the selected plan so that the efforts of all parties involved in it may be co-ordinated and followed up.

Practical Precepts

Since the role of the accountant will be a key one, some practical rules to an approach may be of help.

1. Choose the simple plan over that which seems impressive but is complicated. Always remember that the less complex the method the more flexible it can be made. If it must be made irrevocable, flexibility is vital since there is nothing which frustrates a client more than being locked up for life in a "perfect" estate plan. Loopholes are lifeholes. For these reasons divorce, fertility or new faces in the business cause the nightmares of estate planners.

2. Macabre as it may sound, plan past the first death. The estate planning consultant may outlive his client and may have to explain his handiwork to other generations.

3. As far as possible, matters should be arranged so that the client's funds are not used to pay what death duties may arise. Insurance companies have facilities to prevent this.

4. Avoid the use of cash as consideration for any of the transfers of assets that may have to be effected in the course of the plan.

5. Never plan with the avoidance of income tax in mind. The main objective should always be the legal minimization of estate tax and succession duty. Often a small income tax saving, deliberately arranged to frost the estate plan cake, may trigger an assessment of unsuspected proportions against the unfortunate client. This does not mean to say that if income tax savings occur by accident or incident they should be eliminated. However, many clients believe that an estate plan will reduce their income tax. Such a belief should be disposed of before any plan is started.

6. Wherever possible, the gift tax should be employed as a litmus paper. By exposing some part of the plan to a gift tax assessment, one can determine to what extent it is on "the alkaline side".

7. The inhibiting factor of constantly changing legislation should never be underestimated. It is not only in the realm of politics and labour that the liberal of today becomes the conservative of tomorrow. Fiscal laws rarely create loopholes but they frequently close them. No bona fide, successful, long-term estate plan should rely upon apparent loopholes in today's laws for its effectiveness. It should be designed to stand up under all the normally anticipated legislative changes. This can only be made possible if the philosophical approach is basically correct.

8. Lastly the estate planner should never dismiss ideas which are brought to him by clients even though they are obtained in the most unlikely places. Bars, steamrooms, beaches and aircraft have proved some of the most fruitful breeding grounds for ideas which often turn out to be more stimulating than those generated in the more pedestrian surroundings of a professional office.

An American Viewpoint on Accounting Concepts

DAVID R. DILLEY

THE DETERMINATION of income and financial position is based upon certain underlying concepts. Although much has been written about the individual concepts of accounting, students and others who are not professional accountants frequently lack a complete understanding of how these basic accounting concepts fit into a definite structure of accounting theory. The same is sometimes true, but to a much lesser extent, of practising accountants.

At the present time, there is an apparent lack of general agreement as to how the various concepts are related. Undoubtedly, this is a major cause of the inadequate understanding of the structure of accounting theory.

This presentation integrates a number of familiar but fundamental concepts into a definite structure of accounting theory and seeks to accomplish the following purposes: first, to facilitate a better understanding of the accounting by students and others who are not professional accountants and, secondly, to serve as a step toward attaining greater agreement among the members of the accounting profession as to what constitutes the basic framework of accounting theory.

The framework of accounting theory which follows is one American viewpoint on the subject. It is recognized that in at least one area the framework presented is at variance with present Canadian accounting theory, but it is felt that only as alternate viewpoints are set forth and considered can accounting thought continue to evolve and the accounting profession continue to develop.

Assumptions

The entire structure of accounting theory appears to be based on a number of assumptions. Webster's New International Dictionary defines an assumption as: *A thing supposed; a postulate, or proposition assumed; a supposition. In general use an assumption is that which is taken for granted without proof, frequently as the starting point of an argument.*

An alternative term describing the base on which accounting is built is "convention". Accounting assumptions or conventions are concepts facilitating certain ends. They are justified only if they adequately serve the ends to be attained. They are based on general agreement and do not require conclusive demonstration or proof. Needless to say, however, the validity of the end results of ac-

counting is dependent upon the validity of these initial assumptions.

Assumptions serve as boundary lines within which all other accounting concepts are defined and within which income and financial position are determined. Since these boundary lines are based on fairly general agreement, assumptions are not so fundamental that they cannot be changed if and when general opinion deems such change to be desirable. Changes in assumptions come about when it is felt that alternative assumptions are more realistic and when the end uses of accounting data could be better served by alternative assumptions.

The accounting assumptions or conventions having rather common acceptance are at least seven in number:

1. *Business Entity* — A business entity is an artificial being which owns or is assumed to own or control certain assets against which creditors and owners have certain claims. The activities of the business entity are distinctly separate from those of the owners, regardless of how closely the latter may identify themselves with the business. The accounting records and statements are those of the entity; accordingly, any income earned is that of the entity until the time it is allocated. This assumption appears to be strongly supported by a number of legal doctrines.

2. *Going Concern* — This assumption is that continuity of operations is likely for the foreseeable future. Hence, assets of the entity are stated on the books on the basis of their recoverability during future periods to the going concern. In connection with this assumption, however, accountants generally recognize that when circumstances are known which make this assumption invalid, it should be discarded, and, accordingly, assets should be stated on the basis of their estimated liquidation value.

3. *Accounting Period* — Although an accurate determination of profits can be made only after the liquidation of a business, parties having a financial interest in the business cannot wait until liquidation for this determination. Hence, there is a need for a periodic test reading of revenues, expenses, and net income applicable to a given period of time. This period is generally one year. However, when it is felt that income and financial position would be more accurate if determined over a period other than one year, such determination is usually made.

4. *Monetary Valuation* — The monetary valuation assumption is that the financial status of an enterprise can be stated in terms of a monetary unit. This implies that all tangible and intangible values are expressed in terms of a common monetary unit in the accounting records. Actually it is generally recognized that at times an enterprise owns or has control over valuable factors which are given no direct recognition in accounting. These factors, however, tend to be indirectly recognized through their effects on various accounts and may be directly recognized upon sale or liquidation of the enterprise.

5. *Cost as Economic Significance* — Accounting assumes that the cost of any factor acquired by the business entity represents, at the acquisition date, the actual economic significance of the factor. This assumption is in turn based on the further supposition of rational business conduct, which is

probably a reasonable supposition although never completely true. Of the various alternative assumptions which could be made about the economic significance of business factors, this one appears to be the most logical and useful.

6. *Cost Cohesion* – It is assumed that as the physical factors of production are united to form new utility, the costs of each of these factors unite in the same way as their physical counterparts. This assumption of cohering costs is not an attempt to determine the "value" of the new utility, for such would probably include imputed profits, but is an attempt to measure the efforts in creating it. This assumption appears to be the most realistic of any that could be made regarding cost cohesion.

7. *Constant Value of Monetary Unit* – Accounting assumes that the economic value or significance of the monetary measuring unit remains unchanged. However, it is generally recognized that this never has been true and never will be.

During the years in which the writer has been employed in industry, it has become increasingly apparent that the numerous unfavourable situations arising from adherence to this assumption are overwhelming. Briefly, accounting information is frequently misleading to individuals who are not fully acquainted with all of the underlying assumptions and the implications of each assumption. Further, those individuals who are aware of the inadequacies of accounting data have to make numerous and constant adjustments in order to formulate decisions which are economically sound. Finally, the most serious objection to this assumption of constant values is that since it is fundamental in determining income subject to taxation, it results in numerous and serious inequities among taxpayers.

It is the opinion of the writer that accounting can be of greatest service in the future only if it recognizes changes in the value of the monetary unit.

The preceding assumptions constitute the basic framework of accounting and are intended to be illustrative rather than complete. These assumptions determine the area within which the other concepts must be defined. All the other accounting concepts discussed below are based on these fundamental assumptions and are meaningless without them.

Doctrines

Within the framework of assumptions there exist several taught or recommended conformities which are thought to be desirable policies in keeping accounts and preparing financial statements. These conformities, called doctrines, serve as a guide to the manner in which principles and rules should be applied in accounting practice.[1]

Webster's New International Dictionary states that the word "doctrine" applies to any speculative truth or working principle, especially as taught to others or recommended to their acceptance. Doctrines are not fundamental truths, but are merely strongly held opinions of individuals and organizations that are proposed as desirable policies for others to follow. The five doctrines discussed below

[1] For many of the ideas relating to these doctrines, the writer is indebted to S. F. Gilman, "Accounting Concepts of Profit" (New York: The Ronald Press Company, 1939).

lie within the framework of the assumptions of accounting. Doctrines, as well as assumptions, cover the entire field of accounting. The distinction between these two concepts is that assumptions essentially are the "ground-rules" of accounting which generally are taken for granted, whereas doctrines are advocated policies as to how to record and report accounting data.

1. *Conservatism* – Historically, bankers and other grantors of short-term credit advocated conservatism or "being on the safe side" by valuing balance sheet items with caution. Although formerly considered to be an absolute virtue in accounting, conservatism today does not enjoy its former high esteem. This is probably because of an advance in theoretical analysis which has pointed out certain non-conservative by-products of a conservative balance sheet and because of the increase in the variety of uses made of financial statements.

2. *Consistency* – Gilman has stated "the doctrine of consistency . . . refers to one particular accounting entity and its application is considered satisfactory when the entity's accounting methods, practices, or usages which have some background of general acceptance remain unchanged from period to period."[2] This doctrine also involves a congruity of treatment of particular items on different financial statements of the same accounting period. Consistency is advocated in order to avoid misleading interpretations within any one period and erroneous comparisons of one period with another.

3. *Verifiable, Objective Evidence* – The term "verifiable" connotes capability of being confirmed, whereas the term "objective" relates to the expression of facts, without distortion from personal bias. "Evidence" is that which furnishes or tends to furnish proof. This doctrine means that transactions should be supportable by authentic business documents, and is applicable both to transactions with parties outside the firm and to the subsequent internal accounting treatment of these recorded transactions.

4. *Full Disclosure* – As a policy of report or statement preparation, all information and explanations necessary for interpretation should be included. Disclosures must be made of all information which might influence the decision of a present or prospective investor in the firm.

5. *Materiality* – This term may be defined as "importance in some given respect". One guide to materiality has frequently been the degree to which comparability of statements is affected. The effect on statement comparability varies with the account or accounts involved, the dollar amount, and the size of the particular firm. In the final analysis, materiality depends on the judgment of the accountant.

Summarizing the discussion of doctrines, it is concluded that they are policies advocated in keeping accounts and preparing statements; existing within the framework established by the assumptions, they are applicable to all principles, rules, and practices of accounting.

Principles

Although many individuals and organizations have attempted to formulate a statement of principles which would become generally accepted, no such statement of generally accepted principles exists today in the United

[2] Gilman, op. cit., p. 238.

States. However, certain generalizations can be made.

First, it is generally recognized that accounting principles are not comparable with those in the natural sciences, in that they cannot be established by laboratory experimentation. Secondly, accounting principles are not determined by law or by government directive, nor should they be. They must consider the dynamic nature of the economy and evolve with its needs. They must be developed in harmony with the assumptions and doctrines of accounting and the logical reasoning which considers the requirements and objectives of all parties needing accounting reports. Thirdly, accounting principles are deductive reasoning on which practices are based. They are the source rather than the result of accounting practices.

The dictionary definition approaching most nearly the accounting use of the word principle is "a general law or rule, adopted or professed as a guide to action; a settled ground or basis of conduct or practice". Paton & Littleton have used the term "standards" in this sense and have written that accounting standards will be useful guides to procedures over a wide area of application.

> "Standards . . . are conceived as guides by which to measure departures, when and if departure is necessary and clearly justifiable. Standards, therefore, should not prescribe procedures or rigidly confine practices; rather, standards should serve as guideposts to the best in accounting reports."[3]

Accounting principles encompass a narrower scope than assumptions or doctrines, the latter covering the entire field of accounting. However, the scope of principles is not so narrow as to state specific procedures of application to be followed. Statements of procedures may be termed "rules". These rules, based on accounting principles, serve to guide accounting practice. Defined within this framework, it is apparent that principles are few in number, although the specific rules and practices based on them may be almost unlimited.

1. *Matching Principle*: Income is measured by matching revenues earned against costs consumed.[4]

This principle does not state what income is or of what it consists; it merely states how it is measured. Income has been defined as:

> "The aggregate of unrestricted amounts received or receivable (depending on the method of accounting consistently employed by the taxpayer), in money or other property as (1) gains from personal services rendered, (2) gains from property used by another, (3) gains from property disposed of by sale or exchange, (4) gains from the conduct of a trade, business or profession, and (5) the distributed shares of the income of another person, trust or organization received as proprietor or beneficiary".[5]

---

[3] W. A. Paton, and A. C. Littleton, "An Introduction to Corporate Accounting Standards", American Accounting Association (Iowa City, Iowa: Athens Press, 1940), pp. 5-6.

[4] This principle is similar to one listed by the Executive Committee of the American Accounting Association in "Accounting Principles Underlying Corporate Financial Statements", 1941.

[5] This definition was adopted from a definition developed by the Advisory Group to the Committee on Ways and Means of the House of Representatives, 1953.

The following principles attempt to solve the problem of determining the proper period in which to recognize revenues and costs:

2. *Revenue Recognition Principle*: Revenue should be recognized when an increment in net assets has been realized, or when such realization is reasonably assured. This principle is the basis for all rules relating to revenue recognition.

The corollary to this statement was set forth by a special committee of the American Institute of Certified Public Accountants, "Unrealized profit should not be credited to income account of the corporation, either directly or indirectly . . ."[6]

3. *Expense Recognition Principle*: Expense is recognized in the period when it is directly or indirectly associated with revenue, or when there is a "measurable expiration of asset costs, even though not associated with the production of revenue from the current period."[7] This principle implies that all costs, if they benefit more than one period, must be allocated among the accounting periods in proportion to the benefits to each period.

Although other concepts of accounting might be classified as principles, these seem the most fundamental.

Rules

Rules constitute the detailed development of the general principles of accounting and serve as specific procedures to be followed. Each rule can be traced directly or indirectly to one or more accounting principles. In some cases, two or more different rules may have been developed for a particular situation. It is a function of accounting judgment to determine the way in which each rule is applicable to a given situation.

To illustrate the rules which are developed from accounting principles, we shall examine the principle of revenue recognition. From this principle is derived the rule that the point of sale is generally the step in the series of activities at which revenue is recognized. At this point there is an exchange of one asset for another, which is regarded as evidence of realization. It is also the point at which the amount of revenue is objectively determinable. This broad principle also allows for the rule of revenue recognition upon partial completion of long-term contracts, for the rule of accrual for interest, rent, royalties, and similar items, and for the cash basis rule for instalment sales.

In summary, the basic accounting concepts discussed above appear to be related as follows: Assumptions are the postulates or suppositions which are generally taken for granted without proof; they outline the basic framework within which accounting functions. Doctrines are advocated policies as to how to record and report accounting data. Principles are broad, fundamental concepts which function as the basis for the development of numerous accounting rules. Rules constitute the detailed development of the general principles of accounting and serve as specific guides to accounting practice.

---

[6] American Institute of Certified Public Accountants, "Restatement and Revision of Accounting Research Bulletins", Accounting Research Bulletin Number 43, 1953, p. 11.

[7] American Accounting Association, "Accounting Concepts and Standards Underlying Corporate Financial Statements", 1948 Revision, p. 4.

Punched Card and Electronic Data Processing

JOHN A. WILSON, F.C.A.

THE EVOLUTION of business machines from the introduction of the first commercial typewriter in 1873 to the first commercial application of electronic data processing equipment in 1954 covers a period of little more than 80 years. During most of these years, although the business field witnessed some mechanization in the office, the public was never too concerned with the equipment used. The introduction of the cash register in 1884, comptometer and mimeograph in 1887, adding machine in 1891 and the bookkeeping machine in 1904 required a considerable amount of selling before their general acceptance.

In contrast, the public interest in electronic data processing machines far surpasses that accorded the introduction of any other type of office equipment. Electronic equipment has a certain glamour and fascination for the layman due to its ability to perform a long series of complex mathematical and logical operations automatically at extremely high speeds. The excitement generated by this ability has caused some companies to place orders for electronic data processing equipment with only the most general idea as to where it should be applied, or what its implications would be. In the past, manually operated business machines have attempted to captivate some of this same glamour by presenting typewriting speed contests, matching a manually operated calculator with the user of an abacus, etc. Speed, however, is much more than a matter of glamour today; it is a matter of critical importance in those instances where the growing volume of paperwork and clerical activity have caused a steady increase in the proportion of office workers to factory workers.

Flexibility

The application of electronic data processing techniques to increasing paperwork loads, together with the utilization of the principles of integrated data processing, holds high promise of being able not only to reduce costs, but to provide more and better information as well.

Any business paperwork function. whether performed manually, by machine, on punched card equipment or by an electronic computer, is basically an information processing system in which data enters, is operated upon,

Substance of a paper presented at the Asian and Pacific Accounting Conference, Melbourne, Australia, April 4, 1960.

stored, recovered from storage, and taken out of the system in the form of management reports or summaries. There are, however, certain implications inherent in the processing system which vary considerably, depending upon whether a function is performed manually, by machine, on punched card equipment, or by electronic devices.

A manual system is frequently stated to be the most flexible; but in reality, this has truth only because a manual system employs the most flexible mechanism in performing any given function, i.e. the human mind. Actually such a system is only flexible to the extent that its operating personnel are able to cope with the problems encountered in the data processing activities. Unusual, new or unique problems can greatly reduce the operating efficiency of the personnel performing these functions. Because of the ability of humans to apply learning and common experience to the problems of performing a business function, it is frequently not necessary to explicitly define a given function in minute detail as to the sequence of individual operations, and the exact nature of each processing step. Much is left to the discretion of the human operator. This cannot be the case when using machines. Even the use of bookkeeping machines necessitates thorough analysis of even a simple routine job, complete specifications of the forms to be used, and explicit definition of the information to be entered into the machine.

A punched card system likewise demands complete specifications of the formal data, of the operations to be performed, and of the desired outputs. Individual pieces of punched card equipment are very specialized with regard to their peculiar data processing operations, such as sorting, collating, calculating, printing and reproducing. The flexibility of any system using punched card equipment is thus limited to the flexibility of the individual pieces of equipment being used and the variety of such pieces available. A given piece of punched card equipment can be altered functionally only by the insertion of various control panels, and is thus able to perform only a limited variety of jobs and to handle a restricted number of special situations in each job.

Electronic computers add the dimension of tremendously increased processing speed to a flexibility of processing that is limited only by economic considerations and the ability of a systems analyst to utilize the full capabilities of the equipment. As in punched card applications, the form of all data being used must be completely specified; but unlike a system using punched cards, almost any type of anticipated special situation can be processed along with routine requirements. The key to full utilization of electronic data processing is complete analyses of both the business system and the data processing requirements so that the most common exceptions are fully understood and routine decisions can be made by the computer. Here is the real breakthrough in data processing — machines capable of processing information at extremely high rates of speed without the need for human intervention to handle commonly occurring situations.

Recording and Summarization

Two of the most important problems in any data processing system

are recording information, and providing meaningful summary information. Let us look for a moment at how these problems have been solved in manual systems, punched card systems, and in electronic data processing systems.

Under manual methods, each time information is used it must be copied, summarized and checked in order to ensure that the data from a single transaction appears correctly as either an individual entry or as a part of summary reports in numerous records of the organization. The advent of manual pegboard systems permitted the simultaneous entry to various documents and accounts as a result of one-writing on the pegboard, and reduced the possibility of error.

The assembly of input data for processing in a manual system will facilitate daily entries in the accounts as they can be entered in total from prelisted totals. The use of duplicate deposit slips to form the cash receipts book, standardization of journal entries, daily summaries accumulated and totalled by periods within the month, and the use of duplicate cheques to form the cash disbursements book are some of the other time-saving features that can be used in a manual accounting system.

The value of business machines has been enhanced by utilizing new features in processing documents. The ultimate, of course, is to eliminate writing. Manual business machines achieved the elimination of secondary writing through the collation of forms. The manual business machine meant speed in processing and legibility, simultaneous performance of addition and subtraction operations, automatic proof of all operations and a more even flow of work.

The use of punched card and tabulating equipment has opened up an entirely new series of techniques in the recording, accumulating and presentation of accounting and statistical information. Once basic information has been key-punched and verified on a card, the information can be processed almost automatically to derive the necessary output documents and reports. The punched cards are classified, grouped and compiled by various equipments as instructed by prewired control panels, to give the desired output. As indicated previously, however, punched card machines suffer individually from a lack of ability to perform more than a few operations at a time; consequently any punched card installation usually contains several diverse pieces of equipment for such operations as card punching, card verifying, sorting, collating, reproducing, calculating and tabulating. Since it is necessary to transfer cards from one machine to another several times in order to complete a given job, and since the speed of the machines is limited by their mechanical operation, handling time and cost factors are serious considerations in any large or complex data processing jobs.

Electronic computers and data processing systems have, as yet, done little to solve the huge job of originally collecting and recording data. The most popular input medium for new data is still punched cards, although they are generally used only for entry. Once the information has been introduced into the electronic computer, it can thereafter be called back with relative ease and at great speed from storage media such as magnetic drums, magnetic cores, or magnetic tape. Moreover, once the information is stored inside the computer, it can

be sorted, collated, and processed at electronic speeds under direction of the computer program without further human intervention. Several companies have solved the problem of automatically converting printed matter into electrical impulses capable of being used as input to computers, but cost is still a considerable factor in their utilization.

Comparison of Punched Card and EDP

Punched card techniques have offered management the opportunity of obtaining faster, more accurate, and more complete control information than is possible with manual systems. Electronic computers have gone one step further. Because of the tremendous computational and logical ability of computers, it is possible for an electronic data processing system to materially aid management in the operation of a business by actually making many routine decisions. Moreover, these decisions can be made on the basis of more sophisticated and accurate techniques than were possible before the availability of computers.

In creating a work picture for comparison of the conventional punched card equipment and an electronic data processing system, consider as an example an inventory control and invoicing procedure as handled under the two methods. In using the punched card equipment the following operations are performed:

1. The orders, receipts and other transactions that will change the inventory are punched into cards and verified.
2. The stock editor determines whether an order can be filled, and files the transaction cards behind the corresponding balance cards in an oversize card tray, with the balance card and the transaction cards offset from the body of the file.
3. At the end of the filing operation, the offset cards are manually removed from the file and run through an accounting machine that produces a transaction register and summary punches a new inventory balance card.
4. The revised inventory card is interpreted and refiled in the inventory balance file.
5. The order cards and return cards are sorted out and run through a calculator to obtain extensions.
6. The calculated cards are assembled by hand with heading cards and run through the accounting machine to produce the invoice and other shipping documents. Simultaneously, summary accounts receivable cards are punched.
7. The source cards are sorted, the heading cards are returned to the file, while the order card enter the material accounting procedure.

As illustrated, this system requires a considerable amount of manual editing and filing and the cards must be processed through seven different machines. (Key punch and verifier, collator, interpreter, accounting machine, summary punch, sorter and calculator).

In an electronic data processing system, the cards are punched and verified as under the manual system, but at this point the resemblance ends. When the cards are placed in the input hopper, the computer will perform the following operations through programming:

1. Determine availability of each item ordered.
2. Price each item.
3. Adjust the stock balance in the memory.
4. Print out an invoice.
5. Punch a transaction card from which a transaction register can be listed.
6. Punch an accounts receivable card which can be combined with the transaction card to list detailed statements.
7. Punch a warning card whenever the balance of an inventory item drops below a predetermined level.
8. Punch a back-order card for each item back-ordered.
9. Accumulate usage data which can be unloaded at intervals for sales analysis.

Because the machine can perform logical operations under the control of its programs, such routine clerical functions as determining whether there is enough stock to fill an order, whether the stock has dropped below the re-order point, or whether the customer has exceeded his allowed credit can be performed automatically by the machine. The key feature of this electronic equipment is the stored program, or set of commands, that automatically performs a given set of operations which is in part dependent upon the type of information it uncovers. Certain types of equipment can also have random enquiry to any part. To perform a different operation, it is only necessary to change the program, a very simple task.

Let us now summarize some of the major differences between punched card techniques and electronic data processing. The programming of a punched card machine was done externally and had very limited operations to perform. It was, therefore, necessary to present the information to the arithmetic unit on one card, or on consecutive cards of a group of cards, all related to the same calculation. These limitations were overcome in the punched card process by such operations as preliminary manual calculations, precoding, sorting, gang-punching and collating, requiring human intervention in the calculating process. As can be seen, the conventional punched card system usually requires the manual handling of cards in and out of various separate pieces of equipment. Although a large-scale electronic computer may consist of a group of machines, they are interconnected and capable of performing a complex series of operations without manual intervention. The operation of the electronic computer differs from punched card equipment in three major ways:

(a) Completely automatic operation made possible by the stored program principle.

(b) Very high speed operation which results in tremendous processing capacity.

(c) Very high degree of accuracy effected by the self-checking features that are incorporated, wholly or in part, in the machine design.

From Punched Card to EDP

The move from a punched card system to EDP requires a thorough analysis of the existing data processing system in order to obtain information regarding the volume of input and output data and the method of operations. The commencement of

such a study involves the examination of suggested areas in considerable detail to determine present practices, present costs, desired results, sources and forms of data received, volume of data processed, etc.

A top management group consisting of the general manager, production manager and comptroller should become aware of the basic principles of operation of electronic equipment, the types of problems which can be handled, how they are handled and some general ideas of staff requirements, equipment costs, etc. This knowledge will be used to assess in general terms the possibility of utilizing this type of equipment on their own company and to determine whether a more detailed investigation appears worthwhile. This group will examine all functional areas in the overall company operations to determine whether the functions could be handled electronically either individually or integrated with related functions. For each functional area, the study group must consider such factors as the volume of repetitive operations, the value of earlier or more detailed information, present equipment costs, present salary costs and the possible value of previously unavailable information. Based on the present costs and the possibility of handling one or more of the possible applications on a computer, they must decide whether the possible benefits from a computer installation are sufficient to justify the establishment and training of an Electronics Working Committee to carry out a detailed study evaluating proposed computer applications.

The Working Committee should contain at least two people with considerable company background who should acquaint themselves with the EDP concept. The group will report directly to top management. The managers of the operating divisions will be requested by the group to indicate areas where improved data processing would be most effective. A review of the operational division managers' requirements will indicate to the committee the sequence in which studies of the various areas will be made. When the area to be studied has been selected, personnel from that area should be assigned to the Working Committee. This group will then perform a detailed procedural analysis and develop a new procedure for EDP use. The description of a system requires that the flow of information be defined from its point of origin by the following characteristics: time of origin, volume per unit of time, method and form of transmission, the operations which affect it, and the reports which may be generated from it. With this information, it is possible to get a rough estimate of the time it will take various data processing machines to process and compile this data. This time estimate can be translated into the cost of data processing equipment and personnel.

When the study is completed, they should have an outline of the general pattern for handling the work on a computer and be able to make a comparison of the present and proposed costs. It is important to remember that such a study will be quite time consuming because of the detailed nature of the procedural examinations. Whether they proceed with the introduction of EDP or not, it will be found that such studies are beneficial in any instance, as savings are inherent from the procedures improvement which will result.

Type of Equipment

The type of equipment purchased will depend on such conditions as the volume of work to be performed, the location of where the work should be processed in relation to its point of origin or use, the speed with which the information is required, the number of exceptions to established routines, the need for rapid access to information stored in electronic form, etc. Input data and instructions can be introduced into most computers by punched cards, magnetic tapes, punched paper tape, or an attached console keyboard. Output is through the same media, with the addition of a line printer. Internal storage presently is available in the form of magnetic disk storage, magnetic drums, and magnetic cores. All these have the advantage that no human intervention is required for the computer to gain access to the desired information. Access time is generally fast and is expressed in terms of thousandths or millionths of a second, depending on the type of storage in question. Magnetic tape can be considered both an external storage medium as well as an internal storage medium, because the reels are removable for storage purposes. Access time to the next item in sequence is in terms of thousandths of a second, but access to a given piece of information on a random basis can take 2 to 5 minutes. Other external storage is available in the form of punched cards or punched paper tape.

In evaluating storage requirements, certain factors must be taken into consideration: (1) The cost of internal storage is usually directly related to the size of the storage unit and its speed of access; (2) the sequence in which changes will occur is usually in a serial manner while inquiries will occur randomly; (3) limited time is available to act on the inquiries; and (4) the expansion and contradiction of the master file should be easily accomplished.

Stored records can be made visible to the human eye through the use of electric typewriters or high-speed printers; the choice of particular equipment will depend on the volume, time and cost requirements. Typewriters automatically controlled by punched cards or tape, magnetic tape, or signals from a computer can print as many as 10 characters per second. High-speed electro-mechanical line printers can normally print at a rate of from 600 to 1800 lines per minute.

More advanced electronic equipment is being introduced every month and the field is a complex one to survey. Consideration should be given to the most suitable size and type of equipment needed to produce the desired results on completion of the data processing survey.

Any discussion on the hardware of electronic systems would be incomplete without raising the question of obsolescence. Obsolescence must be carefully considered in view of the ever-changing equipment which is so much faster and more efficient than the present equipment. In some cases this factor is given too much importance. All that can be said of any piece of equipment is that if the proper procedural analysis was made and the machine was justified economically for a long-range program then obsolescence will not be a deterrent to the purchase of electronic equipment.

At the present time, many potential users of large scale computers are

watching closely the introduction of automatic programming systems. These systems, usually called compiling routines, reduce the time necessary to program a given operation by 10% to 20%. Manual programming requires the key punching of cards which tell the machine where to find each piece of information in the files, where to store it in index registers for use, which memory areas should be reserved for computing work, and dozens of detailed coded instructions about sorting, combining and comparing data and about what to do with results. An automatic programming system usually consists of a detailed description of all the data that is to be used in the problem, together with the actual operation described in short concise statements. Each programming system utilizes its own language, but increasing use is being made of regular English statements. This information is used in conjunction with the compiling routine to actually prepare the detailed computer program, which is then reintroduced into the computer to perform the desired operation.

At this point, it should be pointed out that the workload and costs involved in preparatory systems work, programming and coding for a large-scale electronic computer are considerable. First, consideration must be given to the facilities, equipment, and degree of sophistication which are utilized in the present system. Second, it must be recognized that the size, scope, complexity of processing, and required precision of information of the projected system have a direct effect upon total installation costs. Any estimate of probable manpower and monetary expenditures must realistically reflect these two factors. The effort required to move from the present data processing system to a computer system may be very low and may cost only a few thousand dollars for a small computer and restricted application. For larger equipment and extensive application, however, the expense may be hundreds of thousands of dollars.

Testing the System and Equipment

A great deal of time is usually spent debugging programs and volume-testing jobs which are to go on the machine in the future. Parallel testing, that is, running the present system at the same time as the application is on the computer, is an accepted procedure. The testing of the machine and the system using this method allows us to examine the controls as fully as possible. This phase of the installation program is where the public accountant can play a very important role. The system of internal control can be challenged while parallel testing is being carried out. The public accountant must satisfy himself as to the adequacy of the system in order to express an opinion as to the fairness of the statements. The degree of internal control exercised will have a bearing on the scope of the independent auditor's examination. The auditor does not need experience in coding programs, nor is he required to appraise the adequacy of the controls built into the machine by the manufacturers. The auditor should, however, be competent to appraise the adequacy of the controls imposed upon the machine by outside means.

A discussion of the pitfalls to be avoided upon the introduction of electronic data processing equipment generally encompasses the choice of equipment, personnel and the debug-

ging of the new system. Many of the pitfalls can be avoided by stressing at the outset that thorough planning and surveying of the present and proposed system be carried out without regard to time. As the choice of equipment is based on the survey undertaken, and realizing that the data processing field is undergoing rapid technological changes, this is the critical area. A thorough review of the equipment field, and discussions with experienced consultants, will assist in the choice of the right equipment. Keeping the information channels open by having management informed as to the progress being made, thorough indoctrination of employees in all phases of the new system, and the testing of programs are general areas where many headaches can be avoided by an alert electronics group.

Employee Relations Program

The more the employee knows about the machine, the more he will become aware of the fact that automation requires people to tell the machine what to do, requires people to get work ready for the machines, requires people to operate them, and also requires people to interpret the results. From the commencement of an investigation of the installation of electronic data processing equipment, we should include a program of employee education. The fears or misconceptions of the average worker concerning electronic systems can be overcome by education. Methods used to encourage employee acceptance are to make them feel more important as individuals as the result of using this equipment, and to encourage the employees to make suggestions as to how the electronic data processor can be utilized. The fear of wholesale lay-off of workers due to the installation of electronic machines has not materialized to my knowledge, but if normal staff attrition is expected to take care of anticipated staff reductions, this should be made known to the employees.

Time spent in evaluating the human relations problems, getting essential information to the employees, keeping open the channels of communication is part of the program for the introduction of an electronic data processor or any other major change in processing business information.

Conclusion

Electronic data processing holds great promise of solving some of the mounting paper work problems in North America and other continents. With proper knowledge and work, it holds great promise for all progressive managements in aiding them in controlling paper work and improving management information and control.

In this paper, I have attempted to sketch briefly some of the significant differences between manual, punched card, and electronic data processing systems. My experience is that in considering and studying punched card and EDP applications, it is more useful to have a thorough understanding of the broad principles involved than to start with a detailed study of specific equipment. This helps avoid the pitfalls of tailoring the system to the equipment instead of fitting the most suitable equipment to the requirements of the business. The equipment available almost appears "magic" in its capabilities, but we must face the hard truth that these miracles are available only after meticulous and painstaking study to assimilate the equipment with the prob-

lems. After all, machines can only work with the data fed into them.

The goal should be not merely the production of more figures, more quickly, thereby perhaps creating serious filing and waste paper basket problems — but to produce only information justified as useful in relation to cost, sufficiently quickly to provide maximum assistance to management.

The aura of mystery surrounding these machines which has enhanced their public appeal will disappear as one becomes associated more closely with them, but it must be remembered that it takes years of experience to appreciate properly their uses and applications. The old adage "A little knowledge is a dangerous thing" undoubtedly holds true here.

Annual Reports Transformed

The visible proof of this change [in a company's attitude to its shareholders] is the transformation of company reports, both in size and in content. The four-page folder of a few years ago has become as out-of-date as a silent movie. Today an annual report of less than 12 pages would rate as very small, and reports of 16 to 20 pages are usual. Large companies, or companies with complex operations to describe, often have reports of 32 to 40 pages and more.

In content, the change is equally striking. In most cases there is now extensive explanatory text with ample statistical material to supplement the financial statement required by law. In most cases also, care is now taken to make company reports attractive and interesting with pictures, maps, charts and colour. Some reports have become models of fine printing and design. Some, it is true, have gone to garish extremes and resemble sales promotion rather than business reports, but the trend is now more and more towards providing comprehensive information in readable form.

Strangely enough, the most backward reports in the last respect are those which might be expected to set an example, namely, the reports of financial institutions. In both Canada and the United States, annual reports of banks and trust companies in general remain notoriously below the new standard of industrial companies. They are impressive enough in appearance and bulk, but their paucity of real information would rate poorly indeed if offered now to the shareholders of an average industrial enterprise.

— C. J. W. Fox, president, The Great Lakes Paper Co. Ltd., in an address to the annual meeting of that company, Toronto, April 12, 1960.

Organization for Planning

RALPH DAVIES

In today's business world the subject of forward planning arises frequently. Some people praise it, but all too often it is criticized. Some feel that planning may be useful to the large firm but not to a smaller concern. It has also been said that "there is no substitute for good horse-sense".

Another objection to long-range planning points to the decades since 1900. The 1900's were a period of panic; 1910 brought the war years; 1920 led in recession, boom and bust; 1930 saw depression; 1940 brought another war, and 1950 prosperity. On the other hand, a study made in the U.S. revealed that of the 100 largest industrial firms in 1909, only 36 retained their status in 1950. This means that almost two-thirds lost their position of strength, mainly because they did not foresee the changes in industrial development.

Elements of Business Changes

What are the factors which cause business changes? Which elements should be studied closely so that a company can organize itself to meet the challenge of change? There are several.

Political Influences

The first factor to be considered is the world political situation. The struggle for world leadership, the future of China, the emergence of the under-developed countries, all have a great, unmistakable impact on business whether we like it or not.

Population Growth

Higher birth rates, longer life expectancy, immigration and the tendency to early retirement also change the industrial pattern significantly. A larger population may perhaps be dependent upon a relatively smaller work force in the years to come. The number of middle class families may increase, which in turn will directly affect those companies producing consumer goods. In addition, if the standard of living is to be protected, productivity must keep in step with the rate of population growth.

Technological Change

The trends in technical developments hold exciting prospects for the coming years. Atomic and thermonuclear energy, automation, electronics, solar power are going to affect the future considerably. The developments in marketing techniques, the increasing use of motivational research, the relatively new technique of operations research and the progress being made in the art of man-

agement will also have a profound effect on a business.

Influence of Governmental Policies

The third factor concerns governmental policies and actions. Tax rates and structures have a broad influence on investment plans, savings rates and consumption expenditures. The control of the national economy determines monetary and fiscal policies, changes in the import/export regulations, the opening or closing of international markets, the control over the flow of currency. All these can affect business conditions markedly.

Optimism and Pessimism

In a "free" economy the optimism or pessimism of management exerts a strong effect on the business climate. A recent example was the cut-back in inventories in the U.S. a short time ago. Even today the weak stock market reflects a pessimism on the part of investors, an uncertainty in the future prospects of the economy.

These five forces are not independent, there is a distinct inter-relationship among them. They all generate major problems for management to tackle.

The Planning Function

Obviously, if a company is to survive and grow healthily, its present-day management must do some deep thinking and forward planning. This, of course, raises the problem of approach. Who should be responsible for forward planning? It is not a task which can be squeezed in between telephone calls. It takes hard work, perception, intuition, and, above all, time. The first plan produced is rarely right. Usually it has to be made and re-made with each change being an improvement on the last. Consequently, particularly in large firms, this work is going on consistently; it can rarely be finalized and put between beautiful covers. It is always being worked on but never finished.

For companies with a sales volume of, say, $10 million and up, a full-time centralized staff person will be needed to assist top management in preparing plans. Now this does not infer that planning is a one-man job, that planning committees are unnecessary, or that the benefits of having the organization participate in preparing plans will be negated. It really means that the operating executives should be relieved of as many of the details and technical calculations as possible. With one person in charge of the planning function and responsible to the chief executive, a planning group or committee of departmental heads can study and eventually approve the plans submitted.

An arrangement such as this, with the committee members being the senior personnel from the major functions, can operate on an economical basis. The use of one full-time person will free both the chief executive and the committee members from almost all the details, but will not free the committee from policy responsibility. With this type of planning organization, applicable to the larger firms, there is formality. The existence of formality suggests that the position of the planner in the organization should be clearly understood and accepted. At the same time the allocation of the responsibility for the actual process of planning should be considered.

Responsibilities of the Planner

If the basic management principle of placing responsibility with equal

authority is observed, then planning is a line function because the line people are accountable for performance against plans. However, the position, line or staff, of the planner can be determined by knowing his responsibilities. These usually include instructing line personnel in how to plan; making sure that the planning techniques and methods are uniform; conducting certain elements of planning which the line people may not be geared to do, such as economic research; studying the effect of government regulations; summing divisional plans into total company plans; and undertaking personally those phases of planning that are outside the province of any of the existing line executives. If the construction of the planning function is of this nature, the planner is automatically in a staff position. His relationship with the line executives would be one of providing advice and counsel, but not direction. The direction should come from the chief executive down the line to subordinates and from no other source.

Smaller companies cannot usually afford to put a person full time on the planning activity. Nevertheless the line responsibilities in the smaller companies remain the same as for the larger firms insofar as the planning activity is concerned. Similarly departmental heads should form the planning committee which again would be the policy-making body. However, it often happens that conditions and relationships in the smaller company are such that informal meetings are the keynote. Departmental heads are in touch with one another fairly constantly, sometimes both socially and at work, and are usually reasonably aware of the current thinking of their colleagues. Despite this feature, the charting of the future progress of the firm is too important for informality to be the *modus operandi.* Except in the smallest organizations the forward-planning program should be handled by a formal committee operating to a specific pattern with minutes taken and tasks allocated. By this means the detail work can be distributed among the committee members, thereby replacing the staff position formed in the larger firms.

There are distinct advantages arising from the committee approach to planning. One is the benefit of participative management and the delegation of authority. Another is the crystallization of executive thinking, particularly where the formal committee approach is used. This is an excellent means of keeping executives informed about the progress of the business.

Prerequisites for Success

Unfortunately some companies, recognizing the value of long-range planning, have gone ahead without looking closely at the rules and conditions necessary to a successful application. It is pertinent to state the conditions required for success.

A comprehensive plan in which full confidence can be placed will require hours of discussion and deliberation even after the time-consuming collection of data has been done. To have plans which have not been thoroughly examined and upon which profound decisions are to be made is probably as dangerous as having no plans at all. In order to gain the requisite amount of study, management should realize that noticeable demands will be made upon executives' time. As a consequence the participating execu-

tives could readily suggest that because of the pressure of time short-cuts should be taken. Needless to say, short-cuts are quite allowable as long as they do not have an adverse effect on the validity of the plans produced. Therefore any suggestions that certain steps be eliminated or source of data be disregarded should be examined closely before taking such action.

Another factor to be taken into account is the make-up of the planning committee. The development of a master plan for future growth must be entrusted to executives close to the top of the organization. In today's highly competitive business scene, so many influencing factors must be considered that only those with real management breadth are capable of placing the proper values to the several aspects involved in charting the future course of action. Those in specialist functions can usually only provide a limited point of view and their contribution should be confined to those areas with which they are completely familiar. Finally the participants in forward planning should be near enough to the top to see their efforts influencing company policy. Planning, by its very nature, has many frustrations but the worst is to see top management making major decisions and failing to note their full implications on the future which the planning group could help to clarify.

These are some of the problems which should guide management in setting up a long-range planning procedure. Difficulties and frustrations will certainly be encountered, but the rewards will be adequate compensation.

Dark Corners in Small Offices

Different kinds of offices have different types of dark administrative corners, but there are a number of general favourites for an opening series of investigations. The first of these is invoicing and related procedures which tend to be cumbersome, over-supplied with carbon copies and with too many of them filed by different sections or departments. The second place to look is statistical returns. Many firms have let temporary statistical returns become permanent; they do not allow statistics to come as the offshoot of other work and fail to let certain information be recorded by variations or differences.

The third candidate is payroll procedure which is often highlighted by tax calculation drudgery. Approach mechanization with care and do not despise simple, ready reckoners. There are circumstances where these will be more gratefully received by a small staff than a gleaming new machine. A fourth dark corner can be accounts payable where there may be scope for marrying documents such as purchase requisitions, copies of orders, goods received notes and invoices. Finally, there are control records for small stores which are often duplicated and could be issued centrally on an imprest basis.

— *The Accountant*, April 23, 1960

H. C. GOLDENBERG, Q.C.

The Real Estate Tax

H. Carl Goldenberg, O.B.E., Q.C., has been described as "one of the outstanding municipal authorities in the Dominion of Canada". He has served on or been associated with Royal Commissions in a number of the Canadian provinces. This article was adapted by Mr. Goldenberg from his recent report as a Commissioner on Municipal Taxation in Winnipeg.

The real property tax, levied on residential, commercial and industrial property, is the mainstay of municipal finance in Canada. It is also the principal source of municipal revenue in the United States and a major source of such revenue in other countries. One of the oldest forms of taxation, it has been subject to widespread and organized criticism for many years. Notwithstanding this criticism, and in the face of major new developments in taxation, the real estate tax, tenaciously retaining its basic characteristics, has remained, and in all probability will continue to be, the main pillar of the municipal tax structure.

A number of factors account for the continued importance of the tax in municipal finance. In my report on provincial-municipal relations in British Columbia, I set some of them out as follows: "Real estate forms a large portion of the assets of a community and is an important source of income; it derives its value in large part from the general growth and development and the status of the community; it is located within, and is not removable from, a single locality; and it benefits very materially, particularly in urban areas, from the principal municipal services and expenditures. Under normal conditions and in times of stable or increasing income, the real estate tax is the only tax of which the yield can be predicted with accuracy for budgetary purposes, and, having regard to the legal and natural restrictions on the municipal tax base, it is one of the few taxes that can be successfully imposed and administered by local governments. Other taxes, such as income and sales taxes, require much larger areas than the average municipality for successful administration if wide disparities in rates in adjoining areas and wholesale evasion are to be avoided."[1]

[1] Report of the Royal Commission on Provincial-Municipal Relations in British Columbia, 1947, p. 55.

It is submitted in criticism of the tax that it violates the principle of taxation according to individual ability to pay. The answer is that, while the ownership of real property may be an indication of ability to pay, it is not a satisfactory measure of relative tax-paying capacity, and, therefore, the property tax as presently levied does not rest on the principle of ability to pay. It is not a personal tax based on income or net worth; it is a levy on individual parcels of real property determined by applying a rate to the assessed value and is payable by the taxpayer without regard to his total taxable capacity. In a more primitive stage of economic development, the ownership of property was a sufficiently broad measure of tax-paying ability and the property tax could be said to have been more or less based on ability to pay, but with the complicated and elaborate differentiation of wealth in the modern economy this is no longer the case.

There are two principal theories of taxation: the "benefit" theory, which holds that the citizen should contribute to the support of the state in accordance with the benefits he receives from it, and the "ability to pay" theory, which holds that he should contribute in accordance with his ability to pay. While fairness and equity call for the application of the latter principle whenever possible, no modern system of taxation is based exclusively on either theory. With the great increase in governmental expenditures and the levying of taxes on the same citizens by different units of government, the total tax structure necessarily includes taxes based on ability to pay, taxes related to benefits conferred, and taxes, such as excise and sales taxes, which are levied with little regard to either of these principles.

While recognizing the merits of distributing the tax burden as far as possible on the basis of ability to pay, it is also necessary to recognize the fact that there are forms of taxation to which, because of their nature, this basis is not applicable. These include excise and sales taxes levied on commodities, and the real estate tax levied by each municipality on individual parcels of real property within its boundaries without regard to the income or other assets of the owner. The ability to pay principle is in fact applicable only to taxation of net income or net worth, which are measures of tax-paying capacity, and such taxation can be levied and administered effectively in the modern economy only by the senior levels of

---

H. Carl Goldenberg, *O.B.E., Q.C., Montreal lawyer and economist, was chairman of a Royal Commission on the Finances of Winnipeg in 1938 and a Royal Commissioner on Provincial-Municipal Relations in British Columbia in 1946. He has served as special counsel for the Government of British Columbia and, subsequently, for the Government of Newfoundland at federal-provincial financial conferences. As mediator or arbitrator in labour-management disputes, he has effected settlements in major industrial differences. In 1959 he was appointed by the Government of Jamaica as chairman of a Commission of Inquiry into the Jamaican sugar industry.*

government. Since these taxes are among the most productive forms of taxation, the application of the progressive principle to them tends towards a greater equalization of the overall tax burden.

The justification of the real property tax today will be found primarily in the benefit theory of taxation. This theory is particularly applicable in municipal finance; it could scarcely be applied to the more general field of federal finance. While the imposition of taxes solely on the basis of direct benefits received by the individual taxpayer would not be sound or equitable, even if it were possible, the fact remains that municipal expenditures confer special benefits on owners and occupiers of real estate. Expenditures for local improvements, a water supply, street maintenance, sewage systems, garbage removal, sanitation, and police and fire protection, are directly beneficial to real property. The benefits conferred justify the levying of a property tax to pay for these services, although the tax payment is admittedly only a rough measure of such benefits.

Property also benefits from other services financed in whole or in part by the municipality. It has been submitted that education is a service to persons and not to property and should, therefore, be financed by taxes on persons only. Insofar as this submission denies the fact that schools also confer benefits on property, the argument is not valid. While schools are a community asset conferring benefits on persons, they also directly or indirectly benefit property, whether residential, commercial or industrial. The value of schools to homes will not be questioned; people will not settle in communities without schools. Insofar as industry is concerned, it is on the school system that it depends for the education and training of its future employees, and in communities without schools for the children of employees there will not be found the pool of labour which is one of the determining factors in industrial location. To the degree that the financing of education remains a municipal responsibility, I am therefore of the opinion that it is reasonable to expect that real estate, whether residential, industrial or commercial, should contribute towards the costs.

With respect to the submission that the costs of municipal services should be apportioned in terms of benefits conferred on persons and property, respectively, I agree with the following statement from the Report of the Alberta Royal Commission on Taxation, 1948:[2]

"It has been submitted that property taxes should be used to pay only for those services which benefit property directly or indirectly, and that taxes on persons be used to pay for services that benefit persons. Not only is there the difficulty of separating property benefits and personal benefits: it should also seem evident that only persons pay taxes, and in the final analysis, only persons can derive benefits. The benefits of collective services are widely diffused, and no precise lines can be drawn as between different services, and as to the proportions of benefits accruing to persons and to property, even if one assumes that there is a valid distinction between personal and property benefits. If one pursues the benefit principle to the limit with respect to persons (who make use of property in

[2] Report of the Royal Commission on Taxation, Alberta, 1948, p. 37.

various ways), then one would be charging these persons in accordance with benefits received, if the benefits could be determined. It also implies that persons could refuse to take the benefits concerned to avoid payment; this is not possible in the case of collective services. One of the functions of government is to provide certain collective services which cannot or will not in themselves be bought and sold by individuals."

It has been submitted that since the benefits of the collective services provided by the municipality are widely diffused, it is unfair to impose the larger share of the costs on real estate. It is assumed in this submission that the property tax falls in all cases upon the persons who pay it and that the major share of the burden of municipal costs is, therefore, borne by the small proportion of the population owning real estate. This assumption disregards the process of tax shifting. In the case of residential property, it is not only the home-owner who pays a property tax; it is a fact that the tax on rented dwellings tends to be shifted to the tenants in their rentals. It follows that the property tax on homes is generally borne by tenants and owner-occupiers. Similarly, in the case of commercial property, the tax on buildings tends to be passed on to the occupant and if, for example, the occupant is a merchant, he will necessarily take the tax into account in determining the mark-up on his goods, thereby shifting it to the consumer in the price of the merchandise. While the ability to shift the tax varies with economic conditions and other influences and is, admittedly, not based on any principles of equity, it is a fact that the property tax is fairly widely diffused so that, if the benefits conferred by municipal services are diffused, the costs of the services are shared, in varying proportions, by all residents, whether as property-owners, tenants or consumers.

It has been urged that a larger proportion of the real estate tax burden should be shifted to commercial and industrial property. Ontario has given effect to this demand by applying the province's unconditional grants to municipalities to the benefit of residential and farm taxpayers only. Accordingly, since January 1, 1957, two mill rates for general purposes became the rule of all municipalities. Thus, on the basis of an unconditional grant of $5.50 per capita to be applied exclusively for the benefit of residential property, the City of Toronto fixed a rate of 61.80 mills on commercial and industrial property and 58.10 mills on residential property for 1960. In Metropolitan Toronto the rates were fixed at 25.18 mills on commercial and industrial property and 21.40 mills on residential property.

Until the introduction of differential taxation in Ontario, the City of Halifax was the only municipality in Canada which levied a higher mill rate on commercial buildings than on residential property. As a result, a Commission to Investigate the Taxation System in the City of Halifax reported in 1957 that since 1947 the commercial tax burden in Halifax had increased by approximately 267%, as compared with an increase of 50% in the residential tax burden, and that "the city has suffered from lack of commercial development and diminished sources of tax revenue". The Commission found that the burden on commercial real estate "discouraged the consideration of any improve-

ments to existing structures and seriously retarded the construction of new commercial buildings". The situation in Halifax admittedly represents an extreme case.

It is argued in favour of differential municipal taxation that business derives special benefits and privileges from municipal services and that some of these services are more costly because of the special or additional requirements of business. Furthermore, the fact that business is allowed to deduct municipal taxes as an operating cost for the purpose of computing income tax is urged as a relevant consideration, although the actual saving depends upon the existence of taxable income and the relative tax rate. The submission, however, that these considerations warrant a differential in the real estate tax disregards the fact that the tax on commercial buildings tends to be passed on in the prices of goods and services, and, more particularly, the fact that as a general rule business is already subject to differential taxation for municipal purposes because business premises are subject to the municipal business tax levied on the occupier in addition to the property tax levied on the owner.

An important factor contributing to criticism of the real property tax is that it involves a large lump sum payment annually. While personal income tax is now collected through payroll deductions in the case of salaried people and wage earners, and on a quarterly basis in other cases, the real estate tax is due and payable in whole at one time. This makes it appear more burdensome than other payments which are spread over the year. The wide extension of the system of payment for purchases on the instalment plan has now accustomed a large proportion of the population to budget its outlays on a monthly basis. In the case of mortgages under the National Housing Act property tax payments are included with the monthly mortgage payments, and in the United States a large number of cities now provide for the instalment payment of municipal taxes. This allows the taxpayer to provide for his tax payments in the same way as he provides for other payments during the year. Instalment payments are, or appear to be, less burdensome than payment in a lump sum, and if applied to the tax on residential property, payment would be eased and the dissatisfaction of the taxpayer probably lessened.

The property tax pays the larger part of the costs of services which are essential to the well-being of municipal residents. These services have been increased and improved in the past few years in response to their demands. Taxes have therefore risen, as have the costs of other goods and services purchased by the taxpayers. It appears to me that there is less reason for complaint about the rising costs of municipal services, represented by taxation, than there is for complaints about the rising costs of other goods and services. Many of the latter are far less essential than are schools, streets, sidewalks, water and sewerage facilities, police and fire protection, and recreation facilities. Considering the relative importance of the municipal and school services which he purchases, it may be concluded that the citizen receives more value for his municipal taxes than for many other expenditures.

Accounting for Land Development Companies

DAVID A. SPENCER, C.A.

IN CANADA the post-war era has been marked by a rapid population growth accompanied by a considerable influx of foreign capital seeking sound investment possibilities. This has created a demand for accommodation for a rapidly expanding industrial and commercial complex together with a demand for new homes to house the growing population in suburban areas equipped with modern shopping and recreational centres.

Land development has become an important activity in the Canadian community, and practising accountants across Canada are often faced with the accounting problems inherent in this kind of undertaking. These problems stem from the great variety of undertakings which the term "land development" covers, each having special circumstances which require consideration before deciding upon a suitable accounting procedure. In general, a land development project will have the following characteristics:

(1) It usually involves the purchase of a large area, its development up to various stages, and its final sale in parcels of varying size and value. Costs of the parcels sold are not readily identified with the expenditures made.

(2) Its completion may extend over a long period.

(3) It is speculative, sometimes highly speculative.

When computing periodic income, an investor in a land development project cannot always be sure that a profit will be made from the undertaking until his receipts from sales exceed the expenditures which he has made. He tends to favour an accounting procedure which would treat the project as a venture from which profit is not recognized until such a stage is reached.

On the other hand, the income tax authorities do not take kindly to this view and require that profits should be determined as each parcel of land is sold. Moreover, when projects are financed by public issues of shares, the need for an equitable measurement of annual income is of paramount importance where that can be done without undue risk of anticipation of unrealized profit.

Raw Land Costs

Accepting the theory that good accounting practice requires that, where possible, profit or loss be measured as each lot is sold, the first major problem arises in connection with the accumulation and allocation of raw land costs. Raw land costs include the amount paid to the vendor of the land, together with legal fees, commissions, survey fees and other costs incurred in determining the boundaries and securing title to the properties.

One method of apportionment is to allocate the cost of raw land to individual lots on the basis of the ratio which the area of the lot bears to the total saleable area purchased. This gives weight to the size of the lot but not to the fact that the sale value of the lot will vary according to location; for example, whether a corner lot or otherwise, whether on main road or back road, or on high ground or low ground. This method, which, it is understood, will be used by the tax authorities to make an apportionment where no reasonable alternative allocation has been made, would show exaggerated profits on the most desirable lots, tending to be disposed of at an early date, and losses or low profit on the least desirable lots, tending to be disposed of at the end of the venture.

A second method, which is a modification of the above, is to apportion on the basis of proposed street frontage, but this is subject to the same defects as above.

If the investment in the project is secured by a mortgage, the ratio of the "release price" of each lot to the total mortgage might be used, but this again is subject to the defects referred to above.

Probably the fairest method of apportionment is to use the ratio which the proposed selling price of each lot bears to the total proposed selling price of all lots. In order to determine this ratio, it is necessary at the beginning of the venture to prepare maps of the tract of land purchased showing the proposed subdivisions into roads, recreation areas and saleable lots and to place an estimated sale value on each lot based on its desirability, taking into account its size, location, frontage, elevation, depth, orientation and other natural features. The cost of raw land can then be reasonably and immediately allocated, and the basis will still hold good even if there is a general rise or fall in the estimated selling prices.

If this calculation can be made before completion of the purchase contract, consideration should be given to including in the purchase contract a breakdown of the purchase price by specific areas in order to give added weight to the cost allocation which will be used for profit determination.

Development Costs

Development expense includes the cost of clearing, grading, laying of sewers and water pipes, roadbuilding, fencing, landscaping and generally preparing the various areas up to the stage when lots can be sold. Usually the development of a project is carried out in stages, certain areas being fully developed and made ready for sale while other areas are developed later.

Certain development costs will apply to the whole of the area purchased. These may be accumulated and prorated on an area basis to each saleable lot. Other development costs will apply specifically to sub-divisions of the original tract. These may be accumulated for each sub-division and prorated to individual lots in the ratio that the area of the lot bears to the total area of the sub-division. An area basis is usually preferable for the allocation of development costs since, generally speaking, it would not cost more to provide services for a high value lot than for one of low value.

Real estate taxes paid up to the time the property is developed and ready for sale may be allocated to

each lot. The allocation should be made on an area basis.

Substantial assessments for local improvements may be encountered after the development stage has been passed. These should be added to the cost of the inventory of unsold lots whether or not a policy of charging off other real estate taxes after the development stage has passed is being followed.

Under certain circumstances, good accounting might permit interest during the development period to be added to the cost of each saleable lot. It is doubtful if the Canadian Income Tax Act permits the deferment of interest charges in a land inventory even though the procedure provides a fair allocation of costs against revenues from an accounting viewpoint.

During development, sales may be made of standing timber, gravel, clay or rock or other natural resources. The proceeds of such sales should be treated as a reduction of the development costs accumulated against each area. Where land is purchased with buildings thereon which may ultimately be demolished, rents may be obtained from temporary occupancy. These rents should be credited against the accumulated development costs of the particular area concerned.

Carrying Charges on Undeveloped Land

The foregoing comments have been related mainly to the handling of development costs in connection with land which is being made ready for sale. A common situation is one where undeveloped property is carried as part of a long-range plan when development is postponed because of the prospect of greater profits. Under these circumstances it may be reasonable to defer carrying charges and interest, but care should be taken in building up the amount of such deferments. Montgomery's "Auditing", (7th ed.), page 227, has this to say: "When there is a possibility that undeveloped property may be disposed of at a loss, discretion must be used in capitalizing such expenditures (carrying charges). It is not good accounting practice to continue the capitalization of carrying charges to a point beyond the reasonable valuation of the property. On the other hand, while it may be expedient or conservative to charge off expenditures which do not add to the value of assets, it may not be good accounting practice to do so, as it may unduly reduce the profits arising from current operations and understate the fair cost of the asset."

Carrying Charges after Development

When properties are fully developed and ready for sale, the cost deferment process is usually stopped and carrying charges including real estate taxes, interest and, especially, administrative and selling expenses are charged as profit and loss items. Mixed situations will be encountered where development work is partly completed on some lots in a group, which will warrant deferment of particular types of expenditures after properties are available for sale. A dogmatic statement cannot be made, but the caution expressed in the quotation in the preceding paragraph is equally applicable to the handling of carrying charges after the development stage has been passed.

Promotion

The allocation of costs for advertising, travel and other publicity ex-

penses in connection with a development is a problem to which solutions must be tailored to the specific circumstances of each case. Generally speaking, up to the time when some part of the property is ready for sale, such costs could be prorated in the same manner as raw land costs. After lots are ready for sale, it is generally preferable that all promotion costs should be treated as expense.

Handling of Costs Yet to be Incurred

The above methods of allocating costs may not be suitable where a substantial part of total costs is to be incurred in the future, as when a developer undertakes to provide a park or recreation centre after a specified number of lots has been sold or built on. Here it may be more appropriate to determine the ratio of estimated total costs to the estimated total selling price of the lots under consideration and, using this ratio, to credit inventory of lots with the estimated total cost of each lot as sold. The ratio should be reviewed annually. This method, however, will understate the costs incurred to date on unsold lots and in an extreme case may produce a credit balance on inventory of lots. As an alternative, the estimated future costs relating to each lot sold may be credited to a liability account, but if no reasonable estimate of these costs can be obtained, or if the liability is not certain, it may be preferable to refer to the commitment by way of footnote to the financial statements.

Sales

Sales of land may be cash sales or instalment sales. Cash sales present no special accounting problems. Instalment sales involve periodic repayments of principal over a fixed term in accordance with the terms of a mortgage agreement or an agreement of sale. In many cases, sales commission is payable only in proportion to the realized sales price. The fact that the price is not to be received until a later date introduces an element of risk into the transaction as well as the possibility of collection costs should any instalments fall in arrears. Instalment sales will involve tying up capital over a long period, and interest and other expenses will be incurred in periods subsequent to the date of sale. A realistic method of measuring income must be found.

One way is take into income the whole of the gross profit at the time the sales are made and to provide for estimated losses on collection. This method has the merit that profit is recognized when the sale is made, but in practice it is often very difficult to estimate accurately the probable losses.

The preferred method is to take up the gross profit on the transaction as cash is collected. Interest on unpaid balances will be credited to interest earned.

Frequently, prospective buyers will pay for an option to purchase a lot and will subsequently not take up their option. At that time the money paid is forfeited and should be taken into income. Deposits on account of the purchase price of a lot should not be taken into income when received but should be applied to the purchase price only when the sale is actually completed.

In arriving at the amount of profit to be included in the determination of taxable income, regard should be paid to the provisions of section 85B (1)(b) and (d).

Statement Presentation

A selection of financial statements issued by land development companies reveals a lack of consistency in the way in which cost of land and the related development expenses are described on the balance sheet. This, of course, is due to the tremendous variety of circumstances which may surround a given undertaking and make it most difficult to generalize. In making up financial statements for land development projects, the following points should be given consideration:

(1) Land for resale is an inventory item and normally a current asset. Where the project is one where the sale of lots may extend over a period longer than 12 months, it is possible that a correct presentation would show the item below current assets.

(2) A sub-division of the land account is sometimes desirable in order to distinguish undeveloped land from developed land, and raw land costs from development costs.

(3) Explanatory notes should be used wherever usual captions in financial statements do not give sufficient information.

Many companies may incur losses for tax purposes in the opening years because certain expenditures are not deferred as part of the cost of land in accordance with income tax regulations. These expenditures may be lost for tax purposes if there are insufficient offsetting profits within the five years allowed by the tax authorities for carry forward of losses. On the other hand, the measurement of profit, as sales are made, may result in profits on early sales of parcels of land being subject to income tax. However, a loss may be established when the project is finally wound up and the tax paid may not be recoverable. Bearing in mind that the most desirable lots are more saleable and may well be sold first, it is clear that a careful cost allocation must be made in order to avoid an unjust burden of taxes.

For these reasons, land development companies should be sure that all elements of cost which can reasonably be included in the inventory are so treated in their books, and they must be able to substantiate the basis used for costing sales. It is to be noted, however, that it is not clear that accounting treatment and income tax treatment need to be or should be the same.

Edited by W. BARRY COUTTS, C.A.

Accounting Research

Accounting for Inflation

In the years immediately following the war a good deal of discussion took place regarding the effect on conventional accounting of the rapid inflation that was then taking place. It must be admitted that in most cases the "discussion" really amounted to a mere argument in which representatives of industry, economists, and investors attacked conventional accounting for failure to recognize the higher costs of "replacing" fixed assets, while accountants defended the conventional practices. No decision or agreement on the question was ever actually reached, however, although it could be said that the accountants won in that they refused to give way until continued prosperity, some tax concessions, and a slowing down of the inflationary trend reduced the complaints and dispersed the attackers. The problem, in other words, was buried rather than solved, and most accountants have been walking warily and speaking softly ever since in order to avoid any chance of bringing it to life.

Under these circumstances it may seem rather unwise to dig the question up again and to suggest that Canadian accountants should once more direct their attention to the problem. The truth is, of course, that the problem will not stay buried and that, despite the embarrassment it causes to accountants, people both inside and outside the profession will not leave it alone. Since the real difficulties created by inflation will not go away, it seems obvious that these discussions will continue until the problem is resolved.

The reasons why this problem cannot be ignored by the accounting profession were very forcefully stated in one of the more recent public discussions of the problem by Mr. Donald Gordon in his address to the Quebec Institute in Montreal last November. Mr. Gordon, after discussing the problem as he saw it, pointed out the responsibility of the profession in the following terms:

"Public accountants have built up an enviable prestige through a high level of competence and ethical practice. Your opinions carry considerable weight in business and governmental circles, and you have given your opinions wisely on such matters as taxation, revisions to the Canadian Companies Act, and so on. But for 20 years you have been arguing among yourselves about the most important accounting question of our generation, and the shibboleth of 'generally accepted accounting principles' has prevented your profession from coming up with forthright recommendations.

"It could be that this has been the safest course for you to follow. It could be that efforts to make the financial statement reveal the impact of changing money values would provoke so many other difficulties that

the cure would be worse than the disease. If that is the decision so be it, but you won't convince thoughtful people that it is the right answer until your opinion is supported by careful research and analyses. Certainly you may count me as among those who entertain serious doubts that your 'generally accepted accounting principles' are adequate to face the challenge of the facts as they exist. Consequently, because of the great respect I have for your profession, I urge, in the interests of prestige and confidence, that there be no further delays or equivocations."

Mr. Gordon's speech was reported in full in the January 1960 issue of *The Canadian Chartered Accountant*. There is, therefore, no need to repeat or summarize the gist of his argument. Those who are not convinced that inflation creates any problem or who are confused as to the nature of the problem are strongly advised to read the whole speech in that issue. For those who are aware of the problem, the selections quoted above seem to be enough to justify the discussion of the question here and to highlight the basic issues.

It is difficult to see how any member of the accounting profession can really disagree with Mr. Gordon's criticism of our inactivity in this matter. As he points out, even if the ultimate solution is the retention of present techniques, this solution, like any other, must be supported by "careful research and analyses". It is hoped that this department by discussing some of the specific aspects of the problem and by reporting on some of the opinions expressed on both sides, may help to stimulate the interest and discussion which will, in turn, lead to the further "research and analyses" needed for a solution.

A review of most writings on this subject brings out the fact that on this question, as on most contentious questions in accounting, a good deal of the argument is rather irrelevant to the questions at issue. As usual, this situation occurs largely because the opposing parties fail to clarify the terms involved or to analyze the questions at issue adequately. A discussion of some of the terms and an attempt to clarify some of the issues, therefore, seems useful.

Generally Accepted Principles of Accounting

A large proportion of the arguments against any departure from conventional methods turn out, in the last analysis, to rely on "generally accepted principles of accounting". As Mr. Gordon points out, such an appeal actually does not solve the problem and cannot satisfy the critics. That this is true becomes obvious as soon as the real nature of accounting principles is considered. As every thinking accountant knows, they are not immutable laws of nature nor are they supernaturally inspired imperatives of behaviour. They are, on the contrary, only a collection of rules, practices, and procedures which have been found to be useful guides to the accounting treatment to be followed in specific circumstances. Their only justification is their *usefulness*, their only authority their general acceptance. Obviously, accounting principles chosen and retained because they were considered to produce the most useful results cannot be used to defend those results against a charge of inutility. This aspect of the argument must, therefore, be fought on the question of the relative usefulness of the results produced by the con-

ventional and alternative methods and not by reference to tradition and the authority of "principles".

Replacement Cost

The first critics of conventional accounting tended to base their argument mainly on the inadequacy of conventional depreciation charges, based on cost, to provide funds for the replacement of assets at prices substantially in excess of cost. The defenders of the conventional procedures in replying to this complaint pointed out that depreciation is a recovery or allocation of cost, not a provision for replacement. When the question is argued on these terms, of course, an impasse results.

It is possible that a solution would be reached more readily if it were recognized that there are actually several problems intermingled here. In addition to the basic depreciation problem, there is a financial problem and what might be called a management forecasting problem.

With regard to the depreciation problem, it can be pointed out that although depreciation allocates cost, it also attempts to measure the amount of income that must be set aside to offset the wasting of the asset. It is true that no attempt is made to parallel the actual deterioration of assets year by year, but it is intended that at the end of useful life an amount equal to original cost will have been retained to avoid impairment of the asset. The amount needed, under inflationary conditions, to avoid impairment will vary depending on the view that is taken of the nature of the capital fund. This portion of the "replacement cost" problem is thus just another aspect of the general profit measurement question discussed below.

The retention of sufficient funds to enable the enterprise to replace an asset which has reached the end of its useful life is a real and serious problem. Up to this time, however, it has not been considered a problem of income measurement. This does not mean that it should not be. It is a separate question which can be discussed and resolved apart from the problem of depreciation and even from the problem of inflation.

Similarly, the problem involved in forecasting the actual cost at some future time of replacing specific assets, is another separate problem. It is complicated by the possibility that inflation may make future price levels even higher than present levels, but so many other questions of technical development, obsolescence, capacity, etc. are involved in predictions of future capital expenditures that it is difficult to single out the possible changing value of the dollar for special consideration. Once again problems of future replacement have never been considered to be part of accounting income determination. As with the financial problem, it is possible that accounting statements should reflect these factors. How or why they should do so is, once again, a separate problem from adjusting for inflation.

"Economic" Income

Many of the parties to this dispute come to the conclusion that the real problem at issue involves the difference between conventional accounting profits and "economic" income. They then proceed to discuss the advantages and disadvantages of using "economic" income in financial

statements. "Economic" income is usually defined in such discussions as the difference between the net worth of an enterprise computed at current values at the beginning of the period and its net worth, similarly computed, at the end of the period.

Unfortunately, economic income as so defined includes a number of elements — chiefly unrealized gains and losses — which are normally excluded from accounting income for reasons which have nothing to do with inflation. These exclusions, like all accounting principles, can be disputed or questioned. Such disputes, however, have nothing to do with the problem of inflation and their introduction into the discussions of accounting for inflation merely complicates the problem. Comparisons between "economic" and "accounting" income which do not recognize that the differences between the two figures are not due to inflation alone tend to confuse rather than to simplify the problem.

The Nature of Capital

The difficulties involved in comparing income computed on various bases and the difficulties of determining interim income, in any case, usually force the disputants back to a consideration of what appears to be the basic problem — the nature of capital. It is agreed by all parties to the dispute that profit represents the excess of the proceeds of liquidation of a business over the original investment. It is, in other words, the amount that can be withdrawn without impairing capital. Conventional accounting (and company law) regards capital as a fixed sum in dollars so that the preservation of this fixed sum is all that is required. Depreciation on original cost and all the other conventional accounting techniques are designed and intended to record profit and preserve capital on this basis.

The economist, and often the actual investor or business man, is more likely to think in terms of "real" capital, that is the amount of purchasing power diverted to the enterprise or the physical stock of assets with which the business is carried on. When this view is held, capital is thought to have been impaired if, because of inflation, the funds retained and preserved represent less purchasing power than the original investment and would thus not be sufficient to replace the stock of assets with which the business is carried on.

In the simple case of an entrepreneur who invests $10,000 in a stock of goods and after several years of trading sells his stocks to realize $20,000, conventional accounting will record a profit of $10,000. If, due to the declining purchasing power of the dollar, the $20,000 will buy no more at the date of liquidation than the original $10,000 bought at the beginning, those who hold the "real value" view of capital will refuse to recognize any profit at all.

This difference in viewpoint on the nature of capital appears to be the really basic question which must be resolved if a solution to the problem of accounting for inflation is to be found. Conventional accounting depends on the monetary view of capital so that any change in conventional accounting will imply an acceptance at least to some degree of the alternative view of capital. Conversely, any acceptance of the "real value" view of capital as a proper factor to be reflected in financial

statements will involve some departures from "generally accepted principles of accounting". It also appears, however, that once this basic question is resolved, most of the other questions and problems will seem fairly simple by comparison.

Conclusion

Accounting is not, and should not be, an intellectual exercise carried on for its own sake, but a service to the various parties concerned in the operation or ownership of business enterprises. Accountants cannot ignore the increasing volume of complaints from people in these interested groups who complain that the recent and continuing decline in the value of money has made conventional statements relatively useless and even misleading for many purposes. It seems obvious that if the value of accountants' services is to be maintained, they must institute a program of research and experiment in a serious attempt to produce statements that will fulfil the needs of the principal users of financial data.

* * *

Correspondence on Bulletin No. 16

D. L. Sheldon has written a letter to this department taking exception to some of the statements made by I. L. Rosen in his recent article on the verification of inventory values. Mr. Sheldon's remarks on professional responsibility and the significance of the scope paragraph in reports seem to be sufficiently thought-provoking to warrant a wider circulation. His letter is accordingly reproduced below:

Caracas, Venezuela,
March 2, 1960

Sir: I have just read I. L. Rosen's paper entitled "The Auditor's Opinion on the Inventory Figure" in the February issue. While I fully agree that Bulletin No. 16 is a preliminary step in the right direction, I feel compelled to express my disagreement with certain statements made in the article.

Mr. Rosen advocates the requirement that disclosure be made in the scope paragraph, if observation of inventories is not carried out. This is to ensure that other practitioners are "toeing the line" and "not giving clean opinions after rationalizing the justification for other inadequate procedures". It strikes me as unfortunate that a chartered accountant should have so low an opinion of his professional colleagues. If it should be necessary to report non-observance of inventories (assuming the auditor has satisfied himself by other means), why stop there? Should he not also report the failure to complete every step laid down in Montgomery's "Auditing"?

It is fundamental in our code of ethics that every chartered accountant will use the professional qualities with which he is asumed to be endowed. Perhaps, as Mr. Rosen suggests, a few C.I.C.A. members are so careless or dishonest as to give unqualified opinions without having satisfied themselves through currently accepted auditing procedures. If the moral and disciplinary measures of the Institutes are not forceful enough to obtain compliance with accepted standards, then these measures should be improved. However, such measures should exist only between the Institutes and their members; it would be a severe blow to our dignity if it were necessary, as a form of discipline, to make public disclosure each time a certain audit procedure was not carried out.

In the United States the requirement for mentioning absence of inventory observation in the scope paragraph arose out of the public reaction following certain spectacular frauds. The requirement was imposed as a form of police control on American C.P.A.'s, in order to ensure that this procedure was carried out. It is hardly an example to be followed elsewhere, unless circumstances make it necessary. Indeed I think that efforts should be made to reduce the extent of the scope paragraph in the short form opinion, rather than to amplify it.

I believe that the existence of the scope paragraph as a whole is a sign that ours is still a young profession. The public and the Companies Acts still feel it necessary that we explain the work that we do in order to express an opinion. To my knowledge, no similar requirement exists for the practitioner in the more mature professions, in rendering his considered professional opinion to laymen. I hope that in time the competence and integrity of chartered accountants and C.P.A.'s will be so firmly established that it will suffice to state the opinion alone, unaccompanied by any half-hearted explanations of what work was done to formulate that opinion.

D. L. SHELDON, C.A.

Edited by CAMPBELL W. LEACH, C.A.

Tax Review

The Budget, 1960

One of the better ways to spend five cents is to buy a copy of Hansard for March 31, 1960. It contains Finance Minister Fleming's third budget speech and budget papers, which, despite the mixed reviews of his critics, is cheap at twice the price.

The Minister reviewed the economic developments of the past year and expressed his views as to how the fiscal and related policies of the government had contributed to improved economic conditions. With the general improvement in business, capital investment increased, and although the 1959 level of the Canadian savings was high, $1,460 millions of foreign capital flowed into the country to supplement domestic savings. In this connection Mr. Fleming observed, "Any inflow of capital raises questions as to ownership and control of Canadian industry and resources, and also the question of the servicing of debt. As to ownership and control, this government's position is clear. We welcome capital to Canada if, when here, it is willing to act as if it were Canadian and not as if it were foreign. During the past two years there has been increasing evidence, in many quarters, that foreign capital in this country is becoming increasingly conscious of its Canadian responsibilities." Unfortunately in matters of this kind, responsibilities are often ill-defined, but the Minister was confident that the situation was improving and that it would be better if the desired result were achieved by persuasion rather than by legislation.

The Minister of Finance foresees that if we manage our affairs prudently our reliance on foreign capital will continue to decline relative to our economic growth, with a concomitant decrease in the cost of servicing external debt. He stated that "Canadians can increase their own domestic capital and make this country financially more self-reliant if they are prepared to practise increased efficiency, productivity and thrift. This responsibility falls on all levels of government, private business and individuals." From casual observation it would appear that this statement applies with unequal force to the three groups mentioned. By and large private business is keenly aware of the need to increase efficiency and productivity, and perhaps it has a healthier attitude towards thrift than the majority of individuals. As far as governments are concerned, Mr. Fleming may have stated their position more clearly than he intended when he said, "In saying this I am fully aware of the role of leadership that falls to the federal government. It is the responsibility of the government to try to establish the conditions of financial balance within which the endeavours of others can be carried out successfully".

The Minister is of the opinion that

our exchange rate should be determined by the free play of the forces of supply and demand, which seems reasonable. After commenting on this matter, he turned his attention to foreign trade. He expressed some concern over the possible consequences of the two regional trading groups that have formed in Europe: the European economic community of six countries and the European free trade association of seven countries. Mr. Fleming looks forward to the general tariff conference next September of the contracting parties to the GATT in the hope that trade barriers will be lowered.

Government Accounts

Last year Mr. Fleming budgeted for a deficit of $393 million. It is now estimated that the deficit will be $406 million as a result of expenditures of $5,707 million and revenues of $5,301 million. For the coming year he forecasted revenues of $5,892 million and expenditures of $5,880 million or a surplus of $12 million. He based his forecast of revenues on a projected gross national product of between $36½ and $37 billion for 1960, which represents a further increase of 6½% over 1959's increase of 6%.

It is anticipated that revenues to the old age security fund in 1960-61 will be about $630 million and that payments out of the fund will exceed $590 million. The prospective surplus should be sufficient to absorb the deficit of $24 million incurred last year. This will be the first surplus since the fund was inaugurated on January 1, 1951.

Tax Policy

In his remarks on tax policy Mr. Fleming stated that " . . . sound tax policies must be flexible and adapted to changing economic conditions". Regrettably economic conditions are so inextricably interwoven with other considerations that tax reductions are disconcertingly elusive, even when the tax rates are surveyed before elections in the hope that something tangible can be done for the taxpayer. Of necessity, Finance Ministers have become quite skilled in letting the taxpayer down gently. For example, this year Mr. Fleming was happy to say that ". . . we have obtained this goal of a balanced budget without the necessity of recommending any further increases in taxation . . ." He also said "While I look forward to the day when we can undertake a measure of orderly reduction in our public debt, present circumstances do not, in my judgment, warrant an increase in tax rates in order to expedite the retirement of debt". It is unlikely that Mr. Fleming's words comforted taxpayers to any appreciable extent or that anyone felt relieved that tax rates were not increased this year.

All in all Mr. Fleming's review of the economic developments during the past year was interesting and so presented as to test even his best informed critics. Economics is an occult subject even for the experts, and it is hoped that they will continue to speak up as they see fit so that the public may better appraise the wisdom of their elected representatives.

Income Tax Changes

Although no major income tax changes were proposed, the Minister announced several technical changes of considerable interest. He also indicated that the government will be undertaking a comprehensive study

of designated surplus and related matters and that he would "welcome considered expressions of view from all interested persons and organizations". A separate Bill is to be introduced towards the end of the current session to make provision for a new class of profit sharing plans which will be reviewed at that time. The existing provisions of the Act on profit sharing plans are of little benefit to taxpayers and a fresh approach is most welcome.

While comment on the detailed amendments to the various tax Acts is premature by virtue of the fact that the resolutions are merely intentions which will ultimately be enacted, the following resume of the expected amendments may be of interest. As soon as the amendments are actually made, they will be reported upon in greater detail.

Provincial tax credits

The increased provincial tax credit of 13% for individuals is extended to the 1960 and 1961 taxation years. The provincial tax credit for corporations is to be increased from 9% to 10% in respect of income earned in a taxing province which has arranged to replace federal grants to universities. This latter amendment applies to income earned after December 31, 1959 and is effective for the 1960 and 1961 taxation years. At the present time this will apply only to Quebec.

Medical expenses

For 1960 and subsequent years the maximum deductions for medical expenses are increased from $1,500 to $2,500 for a single person, from $2,000 to $3,000 for a married person and from $500 to $750 for each dependant but not exceeding a total of $3,000 in respect of dependants. Such expenses must still exceed 3% of the taxpayer's income before they are deductible.

Non-residents

For 1960 and thereafter, if a person who carries on business in Canada and computes the income from the business on a cash basis ceases to be a resident of Canada, he must include in income the value of accounts receivable and inventory of the business at the time he ceases to reside here. Prior to this amendment a person could leave Canada and then collect his receivables and sell his inventories without paying tax to Canada on the cash received. The proposed amendment seems reasonable.

Amalgamations

The much publicized loophole in section 105C is to be plugged effective April 1, 1960 by the simple expedient of deeming any share, other than a common share, of a new corporation resulting from an amalgamation to be a liability. It is general knowledge that there was an impressive number of hasty amalgamations last year for the sole purpose of extracting undistributed income from corporations tax-free by taking advantage of section 105C. Undoubtedly there would have been many more except for the expert bluffing of the Taxation Division.

N.R.O. investment companies

In 1960 and subsequent taxation years non-resident-owned investment corporations will not be able to deduct a depletion allowance in respect of income from an oil or gas well or mine when computing income. Presumably, dividends received from oil, gas or mining companies will not be affected.

Foreign tax credit

The provisions of the Income Tax Act which determine the credit allowed for foreign taxes are to be amended. A Canadian taxpayer up to now was permitted to deduct from his tax otherwise payable the lesser of:

(i) the foreign tax paid by him on that part of his income from sources in the foreign country that is subject to tax in Canada, or

(ii) the Canadian tax payable on income subject to foreign tax.

The interpretation of these limitations has been the subject of much controversy in the past several years.

The taxation authorities insisted that where the income to which the foreign tax applied exceeded the income subject to tax in Canada, the foreign tax for purposes of the credit was reduced proportionately. For example, if an individual received a U.S. dividend of $1,000 on which the U.S. tax was $150 and he had carrying charges of $500, the taxation authorities contended that he had received only $500 from the foreign source on which he had paid foreign tax of $75. Apparently the law is to be amended to permit the full amount of the tax to be deducted from the tax otherwise payable, provided that it is not in excess of the Canadian tax payable on the income from the foreign source.

The second bone of contention had to do with the determination of income from a foreign source where particular expenses are not definitely attributable to any particular source. The decision of the Supreme Court of Canada in *Interprovincial Pipe Line Co.* v. *M.N.R.* seems to have been a rude awakening for the taxation authorities in that it implied that certain expenses cannot be attributed to any particular source. The situation is to be rectified for 1960 and subsequent years by amending the rules for determining income from a source " . . . to specify the deductions that shall be made in computing the income of a non-resident person from a business or employment in Canada and in computing income from sources outside Canada for the purpose of calculating the foreign tax credit allowed to a person resident in Canada".

While the statements do not indicate the exact details of the changes, it seems likely that an altogether unsatisfactory situation will at last be corrected, even though it would appear that the *Interprovincial Pipeline* decision will be nullified for the benefit of the Crown.

Associated corporations

Over the past several years, an increasing number of taxpayers have found it relatively simple to circumvent section 39(4) of the Income Tax Act. The definition of an associated company was such that, in many situations, it was convenient to divide among several companies business operations that normally would be carried on by a single company and qualify each of the several companies for the low rate of tax on the first $25,000 of taxable income. This was often achieved by vesting a 31% interest in the various companies with outsiders or unrelated employees. It would appear that the requirement that 70% or more of the shares be owned by one person or by related persons will be reduced to one of control, that is to say, more than 50% of

the voting stock. As yet, however, the actual method has not been revealed.

Four-year assessment limitation

At long last, the government has decided to end the hopeless muddle that has persisted for years over the matter of "original assessments". The four-year period after which the Minister may not re-assess except in cases of fraud or misrepresentation will now commence from the date of mailing by the Minister to the taxpayer of the original assessment or of a notification that no tax is payable. It was formerly held that where no tax was demanded no assessment resulted and, in addition, that the assessment need only be completed (and not issued) within the four years. It is also proposed that the taxpayer may waive the limitation period by notice to the Minister.

Lump sum payments

Commencing in 1960, a taxpayer who receives a lump sum payment referred to in section 36 will no longer be permitted to pay tax on it at his effective rate of tax for the three preceding years. From 1960 on, the alternative to including the payment in income is to pay tax thereon at graduated rates of 10, 20, 30 and 40%. The 40% rate applies to the amount by which the payment exceeds $10,000.

Salt producers

For 1960 and subsequent taxation years a corporation whose principal business is the production or marketing of sodium chloride or whose business includes the extraction of sodium chloride from halite deposits may deduct, from income, drilling and exploration expenses incurred in the year in exploring or drilling for halite.

Pension benefits

The ridiculous double taxation of superannuation, pension or death benefits and benefits under a retirement savings plan is to be ameliorated. Where these payments are received by the beneficiaries of a deceased taxpayer, they may be subject to both income tax and death duties. The situation was aggravated by section 26 of the Estate Tax Act which provides that no allowance shall be made for income tax in valuing property. The Minister now proposes to permit the individual who receives one of the benefits referred to above to deduct for income tax purposes a portion of the benefit received, in 1960 or subsequently, determined by reference to the estate tax or succession duties applicable to the benefit where death occurred after December 31, 1958.

Appeal Board

Another member is to be appointed to the Tax Appeal Board to expedite appeals.

Excise Tax Changes

The following items have been exempted from federal sales tax effective April 1, 1960:

Electric heating equipment, designed for use on a system using 230 volts or greater, for permanent installation as part of an electric heating system for buildings. This exemption does not include electric wiring or other materials leading to or connecting such equipment to the electric power supply.

Ducts for warm air systems for heating buildings, but not including materials used in their manufacture.

Laryngeal speaking aids and parts therefore, including batteries specifically designed for use therewith.

Prepared surgical sutures.

Articles presented from abroad in recognition of the saving of human life.

Perlite (obsidian or other vitreous rock in form of enamel-like globules!).

Portrait photographs of individuals.

Perforated pipe for drainage purposes not exceeding four inches in inside diameter (exemption was formerly accorded to perforated bituminized fibre pipe of the same size).

Feed supplements for addition to feeds for fur-bearing animals and materials used exclusively in the manufacture thereof.

Grease traps for septic tanks.

Hardware for doors and sash will no longer be exempt from sales tax, unless the hardware is specifically mentioned in schedule III of the Excise Tax Act.

Other changes concerned the elimination of the exemption for construction materials for ships over ten tons, the acceptance of bonds or other securities of or guaranteed by the government of Canada as security from licensed wholesalers, and a change in the wording of the exemption for coverage for tax-exempt goods. The latter exemption now reads as follows:

Usual coverings or containers to be used exclusively for covering or containing goods not subject to the consumption or sales tax and to be delivered and sold with the goods, and materials to be used exclusively in the manufacture of such coverings or containers.

Estate Tax Changes

The deduction from aggregate net value allowed for gifts made to charitable organizations in Canada is extended to a charitable foundation in Canada, and the Canada Council is deemed to be a charitable organization for purposes of the Act. These changes apply after December 31, 1958 as does the change which permits a revaluation of an asset which was valued on the basis of the present value of an annuity, if within four years of the date of death the "annuity" is reduced. This could occur if a beneficiary were to die or if a beneficiary's marital status changed. The difference in tax on revaluation is to be refunded.

Effective April 1, 1960, net aggregate value is to include " . . . any amount payable under a policy of insurance effected on the life of the deceased for the benefit of the family of the deceased, where such policy, immediately prior to the death, was owned by the employer of the deceased".

The executor of an estate may waive the four-year limit for reassessment by notice to the Minister.

BY PETER C. BRIANT. PH.D., C.A.

Current Reading

MAGAZINE ARTICLES

ACCOUNTING

"STATEMENT OF ADMINISTRATIVE POLICY REGARDING BALANCE SHEET TREATMENT OF CREDIT EQUIVALENT TO REDUCTION IN INCOME TAXES," Securities and Exchange Commission; Accounting Series Release No. 85, February 29, 1960.

In this release, the S.E.C. sets forth its views as to the presentation in financial statements filed with the Commission of the credit equivalent to the reduction of income taxes arising from the deduction of costs for tax purposes at a more rapid rate than for financial statement purposes.

With specific reference to depreciation accounting, the Commission is of the view that the charge equivalent to the tax reduction should be treated either (1) as a provision for future taxes in the income statement with a corresponding credit in the balance sheet to a non-equity caption such as a deferred tax credit, or (2) as additional depreciation in the income statement with a corresponding addition to the accumulated provision for depreciation in the balance sheet. Designating the accumulated credit as earned surplus or in any manner as part of the equity capital is considered by the Commission to be misleading and inaccurate even where the nature of the credit is disclosed in the certificate of the accountant in a footnote to the statements.

The Commission takes the general position that comparable recognition of tax deferment should be made in all cases in which there is a tax reduction resulting from deducting costs for tax purposes at faster rates than for financial statement purposes. Its recommendations are thus not limited solely to matters connected with depreciation and amortization.

AUDITING

"THE AUDIT OF THE COST SYSTEM" by John J. Fox. *The New York Certified Public Accountant,* April 1960, pp. 243-250.

In addition to the presentation of a sample audit program of a cost system, the author of this article considers the objectives of the cost system review; the application of such overall approaches as a tour of the plant and review of internal financial statements, analytical cost reports, and accounting manuals; the detailed procedures to test and review the distribution of charges and credits, the cost and inventory accounts, and the allocation of costs; and the constructive results which may be achieved by an audit of the cost system.

The sample audit program for the audit of a job cost system is as follows:

> Tour the plant with supervisory plant personnel to become familiar with the production processes, the flow of production materials and the organization of the plant.

Ascertain the general nature of the cost accounting system and the procedures in effect by inquiring of the cost accounting supervisor and reviewing the company's internal financial statements and cost reports.

Select an interim accounting period and review the entries recorded in the inventory and cost of sales accounts. Trace amounts to source of entry and test and review underlying details for other than purchases and payroll entries which were tested in other phases of the audit.

Trace charges on a test basis to work in process for actual costs of material and labour from source data to the job order cost cards.

Test the pricing of charges to work in process for material and labour at standard by reference to standard cost records.

Review the procedures for closing job orders with responsible employees. Select a representative sample of job orders closed during the period; review the related job order cost cards, test the computation of the variances and trace to the journal entry.

Review the methods of accounting for scrapped production and scrap materials resulting from the production processes.

Compare the total of sales summarized for costing purposes with recorded sales for the test period to determine that all sales are included in the costing.

Test costing of sales for items selected from costing tabulations by reference to standard cost records.

Review the methods and procedures for establishing standard costs and ascertain that standards have been revised to reflect current conditions.

Test selected items to determine that standards are representative of cost by comparing the standard unit costs with actual costs recorded on the cost cards for completed job orders.

Ascertain the nature of production cost variances and their relationship to the total cost of production to form an opinion of the acceptability of the standard cost for inventory pricing purposes.

Review the computation of the standard burden rates to determine that such rates result in charging period costs to current operations and do not defer such charges to future periods.

Review inventory and cost of sales accounts for other periods in the year and investigate any entries of significant amount or from unusual sources.

COMPUTERS

"How Much Data Screening to Minimize Computer-Detected Errors" by Phillips S. Cruttenden. *N.A.A. Bulletin, Sect. 1*, April 1960, pp. 85-89.

How much preliminary screening and auditing work should be done before transactions are entered on a computer?

Theoretically, says the author of this article, the computer should be programmed to take practically all transactions in random order. It should detect most of the errors and omissions and make necessary corrections without the necessity of rejecting the transaction and printing out the error on an error log. But this ideal in programming can seldom be achieved; hence, some preliminary screening and auditing is usually necessary.

If the field representatives prepare the source documents accurately and the preliminary screening work is done well, there will be few, if any, errors to cause rejects, and the computer error rate would approach zero. The errors which would then appear on the error logs would be errors in computation or in rate applications and similar deficiencies which are not audited or checked before they reach the computer. Thus, savings in clerical error correction costs

and in keypunching and computer rerun time would be possible. On the other hand, if all preliminary screening is eliminated, the number of errors detected by the computer could rise to the point at which correction would be unacceptable.

To find the break-even point between preliminary screening costs and computer-detected error correction costs, reliable cost data is needed as well as data on the frequency of errors. A break-even equation can then be developed to incorporate preliminary screening costs, preliminary error rate, error correction costs, computer error rate, and change in error rate.

Mr. Cruttenden illustrates the use of the formula in a situation where it is desired to effect a reduction of .02% in a computer error rate of .11% Errors may be reduced by more training for field representatives to increase the accuracy of source documents; more training for home office personnel who have responsibilities in documenting, screening and auditing; stimulating the preliminary screening clerks to detect more errors; and, finally, adding more people to the screening unit to intensify the preliminary examination. The break-even analysis then equates the additional costs of the preliminary screening work to the saving in error correction costs.

COST ACCOUNTING

"CLERICAL COST CONTROL" by Harold R. Neuburger. *The Federal Accountant*, March 1960, pp. 50-56.

Pointing to the growing importance of clerical costs in total operating costs, the author of this article suggests a program for the control of clerical costs and describes successful applications of the program in business and government.

The initial step in a cost-control program, he relates, is the inquiry into the lines of authority and responsibility within the office, the origin and flow of data, the existing methods of sorting, recording and filing data, the frequency and volume of document and report preparation, the physical layout, employment practices, and salary and wage rates. The bulk of the required data may be obtained by having each clerical employee or supervisor write job descriptions. But it is better to have the analyst question each employee about his duties and observe what he does. Other information needed in the inquiry phase may be obtained by observation and study of layout, by examination of procedures, forms, machines and reports, by discussion, by reference to existing data, and by preparation of flow charts and work-distribution summaries.

In the second or challenge phase of the program, the analyst must consider the company procedures and policies relating to the hiring and training of employees, assignment of duties, work flow, forms control and document preparation, office layout and work conditions, office equipment, and cost considerations.

In the installation phase, the analyst has to be able to overcome the resistance of employees to change. This may be done, says Neuburger, by a piecemeal approach, which provides time to investigate the results of each change before beginning another. Alternatively, a package program may be adopted on the grounds that deficiencies in procedures will not be known until all changes are implemented.

Whichever approach is used, a periodic follow-up is necessary to determine that undesirable deviations from the original system are not occurring.

FINANCE

"Return on Investment: Fit the Method to Your Need" by Edward A. Ravenscroft. *Harvard Business Review,* March-April 1960, pp. 97-109.

This article develops a consistent approach to the return on investment concept which can be applied to three types of return: operating, cash, and equity. Elements common to each concept are discussed, and exhibits illustrate the calculation of average rates under varying assumptions.

None of the approaches, according to the author, will meet all management needs, but one of the three, or some combination, will be applicable to all evaluation situations for which the return on investment concept is useful. For example, operating return, which relates operating income to assets employed in earning that income, is a measure of *operating efficiency*. It is useful for evaluating the operating effectiveness of segments of an enterprise and is, therefore, adequate for most day-to-day capital expenditure problems. It is also helpful in appraising long-range trends in operating effectiveness. The overall average is also a useful norm to which individual segments or proposed changes may be compared.

Cash return, which is the ratio of cash income to cash invested, is a useful tool for various kinds of *economic* evaluations such as whether to lease or buy the assets employed in a project. Such a comparison cannot be made using the operating return concept because it measures operating efficiency, not economic efficiency. The cash return approach, on the other hand, cannot measure operating efficiency, says Ravenscroft, because it is so closely tied in with the timing of cash receipts and disbursements, which are financial, not operating, considerations.

The ratio of net income to common stockholders' equity is of particular value, states the author, in watching long-term trends for the company as a whole. It also throws some light on the financial contribution of subsidiaries to a parent corporation.

"Current Pension Problems and Inflation" by Clifford R. Simms. *The Controller,* April 1960, p. 157 et seq.

Considered in this article are developments in pensions for unionized and salaried employees, problems raised by plant shutdowns and corporate acquisitions, and the search for more flexible methods of funding pension funds.

In a corporate merger, writes Simms, the cost and benefit aspects of pension planning should be taken into account in the negotiations. On the cost side, the acquiring company should calculate the amount of the past-service cost involved in bringing the employees of the vendor into its own plan. The amount will vary, depending on whether the company to be acquired has a pension plan and, if so, whether it is more or less liberal in coverage and benefits than the purchasing company's plan. Also to be recognized in the price negotiation is the relative status of the funding of the pension plan of each company. A third question involves the actuarial basis on which the liabilities and future costs of each company's pension plan have been based.

It may be that the actuarial assumptions and methods used by the acquiring company are more conservative than those of the company to be bought.

Benefit aspects of pension plans require decisions to be made as to whether (1) the plans of each company will continue separately; (2) they will be merged for past and future service; or (3) they will be merged for future service only. Generally, writes Simms, negotiated pension plans for unionized employees will continue separately, but will be merged in the case of salaried employees. He has found, in practice, that employers usually desire to have all the salaried employees on a comparable basis, at least as far as future service is concerned.

The heterogeneous nature of pension plans with respect to elegibility conditions, coverage, benefit formula, early-retirement benefits, disability benefits and vested benefits, prevents Simms from setting out specific rules to remember when consolidating pension plans. He limits himself to advising that the most liberal provisions from each of two plans should not be incorporated in the combined plan. The resulting plan, he states, would undoubtedly be more liberal and more expensive than the new company would want to finance.

PROFESSIONAL

"Report of the Advisory Committee on Professional Development." *The Accounting Review*, April 1960, pp. 228-232.

This report, by a committee of the American Accounting Association, concerns itself primarily with the development of organized programs of short courses aimed at the practising accountant, offered at various stages in his development. It presents the concepts and types of courses encompassed in a professional development program. It also indicates the interests that university professors might have in such a program, and the contributions which they might make to it.

Seven areas in which the committee believes that programs are needed and might be established are: indoctrination and staff training, refresher courses, courses to prepare candidates for the professional examinations, accounting practice administration courses, current development courses, executive development courses and courses specializing in particular industry problems.

The committee envisages the use of seminars, cases, problems, lectures and workshops, with most of the teaching performed by university professors but with some participation by experienced practitioners. To provide the necessary authority for effective coordination, the report recommends that the professional institute initiate the programs and courses, develop materials, and establish an administrative framework for the program. The cost of the program would be borne by the participants so that the institutions and faculty personnel would be fairly compensated for their facilities and services, respectively.

REPORTS

"Reporting to Stockholders" by Edward T. McCormick. *The Accounting Review*, April 1960, pp. 223-227.

The president of the American Stock Exchange indicts the accounting profession for its failure to provide financial data in a form that is

meaningful to the untrained investor. Accounting, he argues, is useful to management, technical analysts and taxing authorities. But the profession has evidenced, in his view, " a blissful apathy" to the needs of the growing army of corporate shareholders.

The principal difficulty, Mr. McCormick says, is that the criterion of full disclosure has resulted in accounting statements and reports that are too complex for the uninitiated to comprehend. In support of this claim, he cites instances of current assets broken into ten items; current liability sections containing ten items; income statements showing 25 deductions from revenues; and ten more items explaining the change in retained earnings. In addition, the statements are copiously footnoted. To the ordinary investor, he says, it is "a frightening jumble of words and numbers which he cannot understand, and which gives him a phobia for reading any financial statements". The inclusion of such statements in a prospectus designed for investors is criticized by Mr. McCormick as assuming "the fantastic proposition that an investor could and would peruse it, item by item, through this maze of disclosure . . . "

In addition to excising much of the detail from financial statements, Mr. McCormick would re-organize the form of presentation. He calls, in short, for a single, simple, integrated story or picture. This would cull from the balance sheet, the income statement and the statement of retained earnings, the facts essential to an understanding of the financial position and operating results of a company. It would present them in laymen's language and in the order in which the investor would normally be expected to ask for such information. For the investment analyst and others trained in finance, Mr. McCormick would supplement this report with the traditional, detailed information.

BOOK RECEIVED

"The Receiver and Manager in Possession" (4th ed.), by Brian Manning; published by Gee & Co. (Pub.) Ltd., London; 128 pages; 23/½

This book is written to assist accountants occupying the position of a receiver and manager for debenture-holders by giving illustrations of questions which arise and procedures which should be followed. The fourth edition incorporates the appropriate provisions of the British Companies Act, 1948.

Publishers' Addresses

The Accounting Review, Curtis Reed Plaza, Menasha, Wis.

The Controller, Two Park Ave., New York 16, N.Y.

The Federal Accountant, 1523 L St. N.W., Washington 5, D.C.

Gee & Co. Ltd., 27-28 Basinghall St., London E.C. 2.

Harvard Business Review, Soldiers Field, Boston 63, Mass.

National Association of Accountants, 505 Park Ave., New York 22, N.Y.

The New York C.P.A., 355 Lexington Ave., New York 17, N.Y.

Securities and Exchange Commission, Washington, D.C.

NEWS OF OUR MEMBERS

Alberta

J. A. Williams, C.A., Council member of the Alberta Institute, has been elected president of the Kiwanis Club of Lethbridge.

B. F. L. Symes, C.A., Council member of the Alberta Institute, has been elected president of the Rotary Club of Edmonton.

J. I. Rawlinson, C.A. has been elected to the Separate School Board of Calgary.

British Columbia

Church, Pickard, Lane & Newman, Chartered Accountants, announce the admission to partnership in their Port Alberni office of J. R. Hill, C.A. The practice will be carried on at 130 Third Ave. S., Port Alberni, under the firm name of Church, Pickard, Lane & Newman.

G. R. Roberts, C.A. announces the opening of an office for the practice of his profession at 4955 Prospect Lake Rd., R.R. 1, Royal Oak.

A. F. Gosling, C.A. announces the opening of an office for the practice of his profession at Ste. 611, 525 Seymour Bldg., Vancouver 2.

K. C. Jolley, C.A. announces the opening of an office for the practice of his profession at 231 Yarrow Bldg., 625 Fort St., Victoria.

J. T. Watt, Jr., C.A. announces the opening of an office for the practice of his profession at 1746 Marine Dr., West Vancouver.

Ontario

J. C. Pattinson, C.A. has been elected to the board of directors of Catalytic Construction of Canada, Ltd.

McDonald, Currie & Co., Cooper Brothers & Co., Coopers & Lybrand, Chartered Accountants, announce the removal of their offices to 100 University Ave., Toronto.

H. W. Carveth, C.A. announces the opening of an office for the practice of his profession at 1588 Danforth Ave., Toronto 6.

J. R. Dostaler, C.A. announces the removal of his office to 2464 Kaladar Ave., Ottawa 1.

Gunn, Roberts & Co., Chartered Accountants, and Williamson, Shiach, Sales, Gibson & Middleton, Chartered Accountants, announce the amalgamation of their practices. The Ontario and Quebec partners will be: D. P. Aitkens, C.A., C. S. Bond, C.A., K. J. Bryant, C.A., C. J. Dick, F.C.A., D. A. Dixon, C.A., W. F. Gibson, C.A., W. I. Hetherington, F.C.A., A. C. Johnston, C.A., H. N. Jordan, F.C.A., R. J. Middleton, C.A., W. J. Morgan, C.A., W. R. O'Loane, C.A., E. A. Rice, C.A., D. J. Sales, F.C.A., J. W. Scott, C.A., H. A. Shiach, F.C.A., D. W. Smith, C.A., L. J. Smith, F.C.A., J. K. Walker, C.A., R. W. Williamson, C.A. The Toronto offices continue to be located at 7 Queen St. E. and 111 Richmond St. W.

M. A. Bradshaw, F.C.A. has been appointed vice-president of North American Life Assurance Co., Toronto.

D. N. Morris, C.A. has been appointed secretary-treasurer of the Seiberling Rubber Co. of Canada Ltd.

Quebec

Creak, Cushing & Hodgson, Chartered Accountants, announce the removal of their offices to 1111 Beaver Hall Hill, Montreal 1.

Middleton Hope & Co., Chartered Accountants, announce the removal of their Montreal offices to The Prudential of England Bldg., 635 Dorchester Blvd. W., Montreal 2.

Correction

In the May issue it was stated that W. E. Falconer, C.A. had been appointed executive assistant to the controller at the Gillette Safety Razor Co., Montreal. Mr. Falconer has been appointed executive assistant to the controller, at the Gillette Safety Razor Co., a division of the Gillette Co., Boston, Mass.

OBITUARIES

We regret to announce the death of the following members:

MOISE A. SAUVE – died on March 20, 1960, in Montreal, Que., at the age of 44. A graduate in Commerce from McGill University, he was admitted to membership in the Quebec Institute on February 12, 1952. At the time of his death, Mr. Sauve was chief auditor for Canadian Pratt & Whitney Aircraft Co. Ltd.

ALFRED GRAVEL – décédé le 20 mars 1960, à Berthierville, Qué., à l'âge de 83 ans. Monsieur Gravel fut admis à la Corporation des Comptables Publics de la Province de Québec le ler avril 1927, et lorsque cette corporation se fusionna avec l'Institut des Comptables Agréés de Québec en 1946, il devint membre de cet Institut. Depuis 1955, monsieur Gravel était retiré des affaires, mais avant cette date, il était un associé de la firme Pelletier, Gravel & Deslierres de Montréal.

JOHN S. SIMPSON – former president of the Alberta Institute who died on February 28, 1960 in his 52nd year. He became a chartered accountant in 1930 and was a partner in Harvey, Morrison & Co., Calgary. He was a past president of the Kinsmen Club of Canada.

JAMES W. STANSBERRY – who was admitted to membership in the Alberta Institute in 1953. He was associated with Clarkson, Gordon & Co., Edmonton.

INSTITUTE NOTES

ONTARIO INSTITUTE

***Research Grant*:** The trustees of the C.A. Universities Research Trust Fund have announced the award of a grant of $1,200 to Dr. Calvin C. Potter, associate professor of commerce, McMaster University, Hamilton. Dr. Potter proposes developing mathematical models for several "business games" on industrial accounting.

"Business games" are a simulation technique believed to hold considerable promise as instructional and research devices in accounting, auditing and finance. They are believed by many to be superior to case studies as they offer scope for judging the effectiveness of remedial measures applied to a problem. Dr. Potter's specific research will be for the purpose of determining the influence which the form of accounting presentation may have upon business decisions.

***Public Accountants' Council*:** The Council of the Institute has named the following members as appointees to the Public Accountants' Council for two years from May 1, 1960 – D. A. Ampleford, W. J. Ayers, W. M. Brace, W. I. Hetherington, E. D. Lafferty, H. R. Macdonald, G. A. MacDougall, J. R. M. Wilson. The Public Accountants' Council comprises eight nominees of the Ontario Institute, five nominees of the Certified Public Accountants' Association of Ontario and two licensees elected by license holders who are not members of either of the two qualifying bodies.

***Member Expelled*:** As required by the provisions of by-law 60, notice is hereby given that Thomas Edward Ryley has been expelled from membership in the Institute of Chartered Accountants of Ontario. The Council ordered the expulsion under by-law 59(e) after a formal hearing held on May 2, 1960, into a charge that Mr. Ryley had

failed to maintain the standards of competence, moral character and conduct which the Institute and its members have established, when engaged in the practice of his profession.

QUEBEC INSTITUTE

Provincial Conference: Among the subjects scheduled on the conference program of the two-day conference to be held at the University of Montreal on June 21 and 22 are: current concepts of the auditor's responsibility and his relationship with the client; financial statements as an aid to short-term financing; estate planning; long-range educational planning; recent bulletins of the C.I.C.A. Committee on Accounting and Auditing Research; the "why" and "how" of budgetary control; analysis of the financial aspects of labour-management agreements; a sound approach to E.D.P. evaluation.

Voici quelques-uns des sujets que l'on envisage présentement d'inclure au programme en français: Comment conçoit-on aujourd'hui les relations du vérificateur avec son client? Le point de vue du banquier; L'Administration interne d'un bureau de C.A.; La responsabilité morale du vérificateur dans la préparation des rapports d'impôts.

The 80th annual meeting of the Institute will take place in the afternoon of June 21.

Luncheon will be served at the university on both Tuesday and Wednesday, and cocktails and dinner at the university on Tuesday will bring members together in an informal atmosphere.

Annual Golf Day: The annual golf day of the Institute is Monday, June 13 at the Ilesmere Golf and Country Club. The McDonald Cup will be the trophy for which teams from the practising firms will contend.

OKANAGAN-MAINLINE C.A. CLUB

The first annual meeting of the Okanagan-Mainline C.A. Club was held at the Eldorado Arms Hotel, Okanagan Mission, on Saturday, May 14, 1960.

VANCOUVER ISLAND C.A. CLUB

Dr. R. Matiko addressed a dinner meeting of the Vancouver Island Chartered Accountants' Club at the Pacific Club, Victoria, on Friday, May 13. A film amplified his discussion of the apparent relationship between smoking and lung cancer.

HAMILTON STUDENTS

Spring Dinner Meeting: On Thursday, May 5, J. A. Hartwell, a partner of Chagnon & MacGillivray and a member of the Hamilton Estate Planner's Council, spoke to 50 members of the association on the fundamentals and some of the more commonly used "tools" of estate planning.

NOVA SCOTIA STUDENTS

The Institute of Chartered Accountants of Nova Scotia, in conjunction with Dalhousie University, plans to hold the students' annual seminar this year in two groups: the final year students for a two-week period from August 1 to 12, and the primary and intermediate students for one week from August 15 to 19.

CLASSIFIED ADVERTISEMENTS

All replies to box numbers should be sent to The Canadian Chartered Accountant, 69 Bloor Street East, Toronto 5, Ontario

Closing date is 11th of preceding month

PARTNERSHIP OFFERED — in small Montreal practice for one who by nature is strong technically and can supervise staff efficiently. Box 228.

CHARTERED ACCOUNTANT wanted by Toronto firm. Qualifications are desire to practise, ability to produce and willingness to prove worth. This opening offers prospects of future partnership for right man. Box 225.

CHIEF ACCOUNTANT required by well established and rapidly expanding Canadian company engaged in a growth industry and the leader in its field. This is a new position offering challenge and opportunity for right man. We are looking for ability, willingness to work and drive. Company has pension, profit sharing and group insurance plans. Salary commensurate with qualifications and experience. Box 226.

CHARTERED ACCOUNTANT required of partnership calibre for expanding business in Niagara Peninsula. We also have places for two intermediate students. Please submit complete summary of qualifications, experience, and personal details to: Box 222. Our staff has been advised.

A LARGE INDUSTRIAL group with headquarters in Montreal has an opening for a young English-speaking chartered accountant, preferably bi-lingual, on the internal audit staff, in which there is approximately 40% travelling. Replies giving full resume of qualifications and positions held, together with photograph, should be addressed, in confidence, to Box 210.

ST. MARY'S UNIVERSITY, Halifax, invites chartered accountants who hold a university degree to apply for a full-time position on its commerce faculty. Qualifications and experience will determine salary and status. Direct correspondence to the Dean of Studies.

PRACTICE WANTED: Toronto-Hamilton-Oshawa vicinity. Direct purchase preferred. Box 230.

COMPTROLLER WANTED for head office of firm located in Calgary, Alberta. Should be at least 30 years of age with minimum of 5 years commercial experience after obtaining C.A. degree. Expanding company with branch operations. Apply in own handwriting giving full particulars and references to Box 224.

CHARTERED ACCOUNTANT — Excellent opportunity for a man of proven and above average ability in the practice of public accounting with a long established and growing firm in Ontario. Must be of partnership calibre and should be earning at least $9,000 a year now. If interested, give all pertinent particulars as to yourself and experience, enclosing photo if available. All replies will be treated in strict confidence. Box 232.

MEDIUM-SIZED firm of chartered accountants located in Toronto, wishes to explore possibilities of expansion, either by amalgamation, purchase or succession. Would interested parties please write to Box 229.

MONTREAL C.A. with medium size practice, wishes to join another in partnership in order to effect economy of operation and make succession arrangement. Box 220.

CHARTERED ACCOUNTANT — 1952 graduate, age 39, presently employed in revenue department, desires position in public practice offering responsibility and advancement, preferably in Southwestern Ontario. Would also consider partnership arrangement. Experience has been in public accounting and taxation fields, both as employee and management. Reply to Box 227.

CHARTERED ACCOUNTANT, retiring from a non-public practising position, available for full or part-time employment. Box 231.

MEDIUM-SIZED firm in Toronto has openings for registered students in third year of course. Please give full details of education and experience. Box 223.

BARRISTERS AND SOLICITORS

MACLEOD, McDERMID, DIXON, BURNS, LOVE & LEITCH

Barristers and Solicitors

6th Floor, Hollinsworth Building - - - Calgary, Alta.

PITBLADO, HOSKIN & COMPANY

Barristers and Solicitors

900 Hamilton Building, 395 Main Street - Winnipeg 2, Man.

STEWART, SMITH & MACKEEN

Barristers and Solicitors

Roy Building - - - - - - - - - Halifax, N.S.

ROSS & ROBINSON

Barristers and Solicitors

Canadian Bank of Commerce Chambers - Hamilton, Ont.

GOWLING, MacTAVISH, OSBORNE & HENDERSON

Barristers and Solicitors

88 Metcalfe Street - - - - - - - - Ottawa 4, Ont.

BLAKE, CASSELS & GRAYDON

Barristers and Solicitors

The Canadian Bank of Commerce Building - - Toronto 1, Ont.

BORDEN, ELLIOT, KELLEY & PALMER

Barristers and Solicitors

The Bank of Canada Building, 250 University Avenue - Toronto 1, Ont.

WRIGHT & McTAGGART

Barristers and Solicitors

67 Yonge Street - - - - - - - - - - Toronto 1, Ont.

HOWARD, CATE, OGILVY, BISHOP, COPE, PORTEOUS & HANSARD

Advocates, Barristers and Solicitors

Royal Bank Building - - - - - - Montreal 1, Que.

PHILLIPS, BLOOMFIELD, VINEBERG & GOODMAN

Barristers and Solicitors

464 St. John Street - - - - - - - Montreal 1, Que.

STIKEMAN & ELLIOTT

Barristers and Solicitors

505 Bank of Canada Building - - - Montreal 1, Que.

PRATTE, TREMBLAY & DECHENE

Barristers and Solicitors

100 Place d'Youville, Suite 200 - - - Quebec, P.Q.

MacPHERSON, LESLIE & TYERMAN

Barristers and Solicitors

2236 Albert Street - - - - - - - - Regina, Sask.

LIFE INSURANCE


IBM
"The most efficient typewriter ever made!"
IBM
Letters typed on the new IBM Electric have a distinguished appearance . . . an especially fine quality that builds personal and company prestige. It is the typewriter for the business and professional man who demands the best.
INTERNATIONAL BUSINESS MACHINES COMPANY LIMITED
Don Mills Road, Toronto 6, Ontario.
Branches in principal cities.
the new IBM electric